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olume VIII *April, 1943* Number 8

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HIGH-SCHOOL SCIENCE AND MATHEMATICS IN RELATION TO THE MANPOWER PROBLEM

Cooperative Committee on Science Teaching
In School Science and Mathematics

HIGH-school teachers of science and mathematics have been asked to train boys and girls rapidly and at once for technical jobs in the armed forces and in industry. The purpose of this report is to help secondary-school teachers to analyze their part of the manpower problem and to plan ways of meeting this important task in relation to the war as rapidly as possible.

There are two major needs for the work of young people which high-school science and mathematics can help to supply: (1) practical technicians for the armed forces and industry and (2) a continuous supply of scientifically trained workers for the armed forces and war industry, and for civilian life and industry. Pre-induction training of a practical technical sort is needed by the great majority of boys who will go into the armed forces. Similar training is needed by girls who will go into industry as well as by boys who go into industry after failing to pass the Army physical examination. In addition, scientific education of a more thorough kind is needed by the boys and girls who prepare to meet the professional needs of the armed forces, industry, and civilian activity.

Several proposals have been made for the development of wartime courses in physics and mathematics in high schools. They are designed for students who are not now following the science and mathematics sequences and are expected to help these students get sufficient technical and mathematical background to shorten the time that will be needed to train them for simple technical jobs after they are inducted into the armed forces. A set of five pre-induction courses, based on an analysis of Army jobs, has been outlined by the Pre-Induction Training Section of the War Department and published jointly by the War Department and the U. S. Office of Education. These courses are in elementary electricity, elementary machines, elementary shopwork, automotive mechanics, and radio. They are practical technical courses, emphasizing work with machines, tools, and electrical and mechanical devices. An emergency physics course has been designed for students in the junior year of high school as a preparation for more advanced phys-

ics or for technical courses. There is also the "Emergency Course in Mathematics" which is being developed under the auspices of the U. S. Office of Education, but it is not an official pre-induction course. It is a one-year advanced general mathematics course, designed for fairly able students who have not pursued the mathematics sequence in high school and therefore cannot take advanced algebra or trigonometry. Another type of mathematics—an arithmetic refresher course—has also been suggested and is in operation in Indiana. This course, of two periods per week for one semester reviews mathematics that is usually taught in the elementary school through the eighth grade. It is provided for all students in the last two years of high school who fall below a certain level on the arithmetic screening test. The secondary schools are called on to introduce some of these courses as a means of helping to meet the manpower emergency. Naturally, they want to make such changes as will be really useful. In the interest of efficiency they want to introduce these courses into the curriculum structure with a minimum of dislocation of existing courses. They want to make existing courses serve as far as possible. This Committee has undertaken to suggest ways of reorganizing the science and mathematics program of the high school so as to achieve the immediate goals without unnecessary sacrifice in other areas. New courses are not proposed in chemistry or biology but modifications and new areas of emphasis are suggested as a means of making these sciences more useful in meeting manpower needs.

Physics. — World War II has shown that a thorough training in the fundamentals of science and the mastery of its skills is a vital necessity for victory. The total number of men and women trained in physics was and is a small fraction of our population. Since the total output of physics majors in the colleges in normal years is less than 1000 per year, we are confronted with the necessity of using our secondary schools as the only other source for the technicians, operators, and specialists which the Army needs.

We recommend that the high-school population, boys and girls, be screened according to their aptitude for work in physical science and mathematics. The science aptitude test should be given at the end of the 10th grade to provide proper selection for the academic and pre-induction courses given in the last two years of high school. The outcome of such tests will determine not only the available number of trainees but also the number of teachers who must be trained for the increased number of students. This in itself is a serious problem and requires emergency measures. Teacher-training courses in physics and mathematics may be subsidized in recognized training centers under

the ESMWT program, a policy accepted during the last year by the U. S. Office of Education. It may be necessary for teachers in training to leave the university without obtaining a degree. They should be permitted to return to the university after the war with full college credit for the work taken.

Recognizing the fact that many topics in the customary physics course have little or no relation to the war effort, it is essential to analyze the present physics course from this point of view and to correlate it with the activities of the armed services. Indiana's emergency course in physics indicates what may be accomplished. In each unit reference is made to the technical and field manuals issued by the War Department as they are related to the material under discussion. The course stresses wartime applications throughout and eliminates other material usually covered in a first year course. Thus, in optics, geometrical optics is stressed as applied to the optical devices used in the Army. In sound the chapters on musical acoustics have been eliminated, but propagation of sound, depth sounding, and sound ranging are discussed in some detail. By cooperating with the industrial arts shops, in many schools excellently equipped for the ESMWT program, it will be possible to construct much of the equipment necessary for demonstration and students' experiments. Wide use will have to be made of visual aids such as lantern slides or projection of figures from the Army technical manuals. Close correlation between all preinduction and post-induction programs will have to be provided. In no other field is this as essential as in physics and engineering where continuity of training and correlation of topics could eliminate unnecessary repetition and duplication and lead in the shortest possible time to advanced training.

Biology.—Problems of food supply and nutrition threaten to become more critical during the progress of war and will probably continue to be vital in the immediate postwar reconstruction. A continuous supply of recruits to medical and health services seems even more essential in war than in peace, and it is highly desirable that a supply of professional biologists be trained for teaching and for a variety of technical services. Shifts of emphasis in terms of war effort will be made to stress matters of first aid hygiene, and nutrition; the place of bacteria and fungi in personal hygiene, public health, water supply, and sewage disposal; the use of plant products in the production of food, clothing, shelter, medicine, plastics, and in fermentology; genetics, and plant and animal breeding; conservation of soil, forests, and grasslands in relation to wild life and flood control, and new agricultural practices; field work and applied ecology.

Chemistry.—There are now serious threats to a continuous supply of chemically-trained personnel. It is therefore important that the high schools produce adequate opportunity and stimulus for the preparation of sufficient numbers of chemists, trained to meet critical needs as they arise in the present emergency and in post-war adjustment and reconstruction. The chemistry teacher should teach more thoroughly certain carefully selected fundamentals of chemistry, together with applications most appropriately geared to war needs, particularly as they affect his community. This may well mean that less ground is covered, and there must be re-emphasis in some areas of application—to pre-induction courses; to industry; to strategic materials and the geography of chemical resources and of chemical industry; biological applications; and agriculture. Students, both boys and girls, should be selected by a science aptitude test for basic courses in chemistry and guided into fields in which they will succeed best. Teachers of chemistry should cooperate with the teachers of the five pre-induction courses in providing for the pupil correct and adequate training in the principles of chemistry fundamental to the mastery of these courses.

Mathematics.—Military authorities are agreed that there is a shortage of mathematical training of the men who enter the armed forces. How can instruction in mathematics be modified, and that immediately so as to aid on the manpower problem? For the immediate future the crux of the problem lies in what can be done for the pupils in the 11th and 12th grade or the high school. For those abler students without mathematical background the Committee recommends that high schools provide immediately for this group of special "Emergency Course in Mathematics." If carefully taught during two semesters competent students in this group will probably be able to adjust successfully to any one of a great many post-induction courses. For another group of students with less than average mathematical ability the Committee recommends that schools provide immediately a refresher course in mathematics, meeting five days a week for one semester and continuing for a second semester for such pupils as may need it. For the students who are already in the mathematics sequence the Committee recommends that those who are doing good work be urged to continue in such a course. Military authorities have stated with emphasis that brief courses are not full substitutes for the standardized and rigorous courses of the traditional sequence in mathematics and teachers of mathematics should be the last to abandon this position. But teachers of mathematics should resist the temptation to build up heavy enrolments in the sequence courses—

students should be carefully selected as regards ability and aptitude.

Summary and conclusions.—High-school teachers and administrators have three principal responsibilities in relation to the manpower problem. The first is to provide a variety of courses suited to the abilities and previous training of various groups of high-school students and geared to the needs of the war machine. The second is to select and guide boys into the courses in which they can make their best contribution. The third is to recruit, select, and train girls for the work which they can do most effectively.

Differentiation of courses in physics and mathematics seems to be indicated, although new courses in biology and chemistry are not needed. In physics and mathematics the aim should be to provide appropriate courses for students who will work at jobs requiring varying levels of theoretical knowledge and practical skill. The manpower problem is not only a problem of giving great numbers of boys a pre-induction training of a practical technical sort but also of giving smaller numbers of boys and girls a thorough scientific training leading to scientific work in college so that they meet the continuing need for scientifically trained workers in the armed forces, industry, and other essential civilian activities.

In physics, it is desirable to continue teaching a college preparatory course to a smaller proportion of boys and girls, those who may expect to go on to college for scientific training. The pre-induction courses in fundamentals of machines and electricity may well be taught as simple, practical courses for the great mass of boys, who will be assigned to learn technical jobs when they get into the Army. In mathematics, the college preparatory sequence of advanced algebra, solid geometry, and trigonometry should be taught to a small proportion of students. A new course should be specially designed to teach the mathematics necessary for technical jobs held by enlisted men in the armed forces. This should be a kind of advanced general mathematics. Finally, a refresher or review course in arithmetic might be taught to boys in their last semester of high school if they fall below a certain standard on an arithmetic screening test.

The proper selection and guidance of students must follow the establishment of differentiated courses in physics and mathematics. The Army and the Navy both have adopted the policy of sending many young men to colleges with orders to follow college courses designed to prepare them for advanced technical work of importance to the armed forces. Some of these will be trained for specific military jobs. Others will be trained as doctors, physicists, chemists, engineers, and may be sent into non-military work if the war lasts long enough and

civilian needs become urgent. These young men, while in high school, should pursue the orthodox high-school college-preparatory curriculum with emphasis on science and mathematics.

It appears that at least 10 percent of 18 and 19 year olds will be selected for post-induction training in the colleges. Thus, at least this proportion of boys should be advised to stand by the regular college-preparatory science courses. The War Department has suggested that 20 percent of the boys in and out of school should follow "a war-applied course in physics and mathematics" as background for continued specialization at the college level. When we remember that only about 55 percent of the 17-year-old boys are in school, we see that at least 20 percent of high-school senior boys should take college preparatory science. The policy of giving all boys only pre-induction courses of a practical technical nature would be a short-sighted one, for it would dry up the source of the continuing stream of scientifically trained personnel which is needed in war as well as in peace.

Women will become a more important part of the manpower reservoir as the war goes on. They will be more and more in demand as nurses, laboratory technicians, research workers, teachers, and factory workers. Girls in high school should be guided into appropriate vocational channels on the basis of the same kinds of information about their abilities as is used in guiding the boys. More girls should take biology and chemistry than have taken these courses in the past. The pre-induction shopwork course, and also the pre-induction electricity and machines courses should be open to girls who show some aptitude for work in these areas.

The small high school will have difficulty in meeting the need for differentiated training of students with various abilities. If a teacher has only enough students for one class he can give extra attention to boys who have special promise. The small school, however, can concentrate on shop training if it has a vocational agriculture course, and it can prepare more boys for efficient work in agriculture.

The Committee believes that it would be unwise to offer new war-time science or mathematics courses below the 11th grade. Present courses may, of course, be modified in content to take account of war needs and war applications. Tenth-grade courses, in which students are mainly 15 years old, can hardly affect the Army or industry for three years or more. Present national policy appears to favor making a maximum effort in the training of young people who will serve in the armed forces or in industry during the next year or two.

The curriculum changes which are now taking place in the upper years of the high school should be

regarded as temporary. These are emergency changes. No pattern for a permanent curriculum is likely to be found in them. Yet the experience of adapting science and mathematics teaching to the needs of immediate and fateful action should prove invaluable. Out of this experience, though not out of the emergency curriculum pattern, may come vital ideas for the improvement of post-war science and mathematics teaching.

The Committee estimates that enrolments in college-preparatory and pre-induction physics courses will at least double and possibly triple normal physics enrolments. In mathematics the enrolment in trigonometry may triple while the enrolment in advanced algebra may double. In addition, the new emergency course in advanced general mathematics will draw a large enrolment. In these courses there is already a scarcity of teachers, while the number of chemistry and biology teachers barely meets the demand. Where can the new teachers be obtained? The institutions of higher education have the responsibility of recruiting and training people for these jobs. They, and state departments of education, may have to make temporary adjustments in requirements for majors and for teachers' certificates. Fundamentally, the problem of securing enough high-school teachers of science and mathematics to meet emergency needs is the problem of paying them enough to attract them.

[The Cooperative Committee on Science Teaching is composed of the following members: K. Lark Horovitz and Glen W. Warner of the American Association of Physics Teachers, B. S. Hopkins and Martin V. McGill of the American Chemical Society, A. A. Bennett and Raleigh Schorling of the Mathematical Association of America, Oscar Riddle and Walter F. Loehwing of the Union of American Biological Societies, and G. P. Cahoon and Robert J. Havighurst of the National Association for Research in Science Teaching. *Reported from* School Science and Mathematics, *XLIII (February, 1943), 126-56.*]

THE school garden at Wayland, Michigan, produces enough vegetables to supply the needs for the school hot-lunch program.

A PROGRAM FOR SOUND EDUCATIONAL CREDIT FOR MILITARY EXPERIENCE

THE AMERICAN COUNCIL ON EDUCATION

IT was obvious to the representatives of the armed forces and advising educators engaged in formulating the program of the United States Armed Forces Institute that one of the strongest incentives which could be offered the prospective student would be the possibility of receiving some form of credit, on readmission to academic or scholastic life after demobilization, for correspondence study completed during military service. Clearly the usual evaluation would be difficult, if not impossible, in relation to a program of largely selfteaching materials studied by thousands of soldiers and sailors who would be thousands of miles removed from the parent Institute, changing posts of duty frequently, and often located in battle zones and inaccessible parts of the world. To solve these problems the Institute was provided with special and appropriate testing materials developed for it at the University of Chicago.

Meanwhile the American Council on Education, with representatives of regional accrediting associations and of the several committees concerned with the program of continuing education in the armed forces, was considering the wider problem of credit for military experience in general, with special emphasis on avoiding the error of indiscriminate blanket credit which followed the last war by the development of a sound alternative program. These educators determined to "recognize, in anticipation of the soldier's [or sailor's] readmission to school or college, for appropriate credit and proper placement of the student, the appraisal of the level of competence of the individual based on Army Institute examinations of the individual's educational experience acquired while in the armed forces either through Institute courses or in such training as officer candidate schools, specialist training . . . or the orientation program. . . ."

Thus the Institute's testing program, begun to measure achievement in its own courses, was extended to include measurement of all educational experience in the armed forces, with the objective of assisting schools and colleges at the time of readmission. The sole interest in this plan is to provide factual information to be utilized *by the individual institutions in the light of their own policies* with regard to placement and credit—*not* to dictate to schools or colleges in these matters. As a broad general basis the following three-point approach was proposed:

1. *Credit for Military Training.*—Institutions which allow credit for ROTC, physical training, or free

electives may well consider granting direct credit, in these terms, for military training, in proportion to the length and extent of military service and without further examination; not to exceed, however, the total amount of credit available in these fields—presumably not more than one-half semester college credit, or one semester high-school credit.

2. *General Educational Placement.*—At the time the individual is discharged from the armed forces, the Army Institute will make available to the educational institutions a "competence profile" of the returning service man (or woman), including his full military and previous educational record and also his Army Classification score and his scores in a battery of tests of general educational competence; to enable the school or college to effect an appropriate educational placement of the applicant in terms of his indicated educational maturity and the extent to which he has met the general educational requirements of the school or college.

3. *Credit in Special Fields.*—On the basis of both his general record and his achievement in the competence level battery, the returning student will be tested further in fields of special competence or training; and on the scores of these detailed tests, which will also be supplied by the Army Institute, the receiving institution will be able to determine in terms of its own curriculums what specific credit the candidate is entitled to receive in any special field or subjects; and, as well, to plan and recommend a program of study for him.

The question of procedures was approached with the dual aim of setting up a schedule and organization which would meet the immediate needs of returning casualties and other men currently discharged from the armed forces, and also be readily capable of expansion to cope with the larger task of mass demobilization when the war is over.

A qualified officer, experienced in educational personnel problems and procedures, and an experienced group of assistants will shortly be designated by the armed forces to take up residence at the United States Armed Forces Institute, to act as a central staff. Concurrently qualified educational specialists will be named, as required, to serve as field officers. In general, the field officers will furnish the personal or interviewing contact with the individual, while the central staff at the Institute will oversee procedures, interpret records and tests, and transmit the results to the educational institutions. Upon request of any institution, the Institute is preparing to supply specimen copies of alternative forms of the tests it employs, so that the institution may calibrate them in terms of its own enrolment and curriculum and establish its own norms. The appli-

cant's norms also are to be reported in terms of national norms, and broken down further into norms for types of institutions, based on the best available information and statistical procedures. A detailed manual, to be supplied to all institutions as soon as it is completed, will be a guide to the interpretation of test scores in terms of placement and curriculum equivalents.

Although the testing procedures described are operated by and through the Institute, they are not restricted to Institute courses or to service men who have taken the courses, but apply to *all* military experience and to *all* service men returning to educational institutions whether or not they have taken Institute courses. In application of the procedures, considerable flexibility will be necessary, both as to the individual and the type of institution. Obviously the candidate for a technical college should not be examined in the terms of a liberal arts college, or the candidate for a vocational high school in terms of a general high school.

To illustrate the procedures in action it may be helpful to state an imaginary case. Bill Smith, let us suppose, graduated from high school in 1940, enlisted in the Army, completed his basic training, went on to the chemical warfare school, and emerged with the grade of technical corporal. December 7, 1941, found him on active duty in the Philippines. Early in the fighting he was wounded and invalided home. During convalescence he completed correspondence courses, through the Institute, in chemistry and mathematics. Now, after a year in hospitals, he is about to be discharged and demobilized. Through a Special Service bulletin he learns of plans to accredit the continuing education in the armed forces on their return to educational institutions after discharge. Bill decides he would like to go to college. He sends his application for examination and guidance to the Institute.

The Institute obtains full information about Bill's education and vocational background and his desires and ambitions. It prepares a transcript of his military personnel record, with special attention to his Army Classification score, his rating in chemical warfare school, and his records and ratings in the correspondence courses he has completed. Tests, both general and special, are then used to measure Bill's general educational competence and his level of achievement in special fields. Bill is shown to be "strongest" in mathematics and science, "weakest" in expressing himself in writing. His overall "profile" is found to be that of a mid-year or "advanced" college freshman. He has acquired the educational equivalent of first-year chemistry, he has demonstrable mathematical ability, but short of full first-year college competence.

Bill's complete record is transmitted by the Institute to the college of his choice, with the recommendation that he be required to write an English placement theme for classification in Freshman English. The college, of course is free to interpret the record in its own terms or even to ignore it. The following might be the college's course of action: (1) to admit Bill as a midyear or "advanced" freshman; (2) to give him full credit for first-year chemistry; (3) to give him credit for first-*semester* mathematics; (4) to require him to take first-semester English; (5) to allow him, if the college grants credit for ROTC, physical training, hygiene, or free elective, credit in these terms for his military training; not to exceed one-half semester; (6) to waive, in recognition of Bill's maturity as a returning soldier, requirements ordinarily applied to freshmen, such as freshman week, or green caps; and (7) to give special counseling attention to any physical or other deviations from the normal which might be Bill's legacy of war.

Where high-school level is indicated, the test materials will naturally be somewhat simpler and the procedures likewise; and where advanced college competence is indicated, or special technological or professional ability, the tests and procedures will be comparable. In all cases, the effort will be solely to supply the school or college the best available *evidence* of general and specific competence, on the basis of which the institution is free to admit, place, and credit the returning service man in the light of its own policy. The institution is free to administer admission and placement tests of its own. For most institutions, however, the procedures as outlined here will prove not only time- and labor-saving, but will be a welcome alternative to the return of blanket credit, which must almost certainly be expected in the absence of a concerted program. In keeping with the type of experience to be evaluated, every effort is being made by a staff of specialists of the University of Chicago, designated by the Subcommittee on Education of the American Council on Education, to construct tests which will give a genuinely educated person an opportunity to demonstrate his competence, regardless of the manner in which it may have been acquired.

[*Reported from* Sound Educational Credit for Military Experience, ***Chapter III, pp. 9-20.*** *Washington: American Council on Education, 35 pp.*]

MAKING FARM WORK AN EDUCATIONAL EXPERIENCE FOR CITY BOYS

SETH PHELPS

In the School Review

IN 1942, the first year of our participation in World War II, some urban boys worked on farms in the summer, but for the summer of 1943 the high schools will, undoubtedly, have to supply a much larger number of farm laborers. The question that arises in the mind of any person seriously concerned with the development of the boys, as well as the harvesting of the farm crops, is: What can be done to assure that the youths will obtain through their farm work some educative experiences which will afford them greater insight into problems of rural living?

The faculty of the Laboratory Schools of the University of Chicago has concerned itself with this problem because members of the staff believe that an urban boy's summer on a farm either can consist in a series of perfunctory, rule-of-thumb, relatively uneducative experiences or can send the youth back to the city with an insight into rural problems that will make of him a better citizen for the rest of his life. As a result of this conviction, during the summer of 1942 a number of high-school boys were placed on farms in Racine County, Wisconsin, under the supervision of the writer. He lived in the community and spent his time going from farm to farm, talking with the boys and with the farmers as a means of securing the ideas and viewpoints of both groups. Our experience, corroborated by a follow-up study in which all the farmers were asked what they considered the strengths and the weaknesses of the program and whether they wanted the boys to work for them another year, proved that city boys can do valuable work on farms under a variety of circumstances. Some officials feel that they are doing their share in aiding this movement when they make it possible for boys to leave school early; they do not consider it neceessary for the school to play an important role in controlling or influencing the learning experiences that the boys will have on farms. The conviction of the teachers in the Laboratory Schools is that boys need supervised farm work experience and will benefit greatly from it. Consequently arrangements are made for a regular member of the school faculty to spend the summer in the community where the boys are working, and serious attention is being given to planning a series of related learning experiences which the boys can have before they report to the farms.

Out of the experiences of the summer of 1942 came the realization that a great deal of time could be saved and much more effective

farm work would be done if the boys received some preparation for their tasks. Consequently a series of seminar meetings are being held for all boys interested in working on farms during the summer of 1943. In general the seminars have been planned to contribute to rather broad basic understandings rather than to the development of specific skills. We had learned that the boys from the city were bright and could learn quickly if they had the right point of view or sensed the proper relationships or understood the significance of their tasks. They were able to learn skills in a hurry provided that they saw some point to them. Naturally the farmers, in many cases, were concerned with getting the work done and were not uniformly conscientious about explaining the whys and wherefores. The primary purpose of these seminars is to supply the boys with these whys and wherefores.

Each of the seminar meetings is devoted to some specific aspect of farm life, as follows:

Physical Health.—The main purpose of this section is to impress on each boy the fact that he himself will be responsible for maintaining his physical strength during the summer. These points are thought to be important: (1) Regular habits of eating and sleeping are essential to bodily health. (2) Bodily cleanliness is imperative both because of importance in maintaining health and because of certain social values. (3) Safety-first precautions must be observed at all times. (4) Injuries, no matter how slight, should be attended to promptly.

Mental Health.—In this section, intended to orient the boys to rural living, special attention is given to the problems of adjusting to life in a strange family, and the general factors which enable boys to adjust satisfactorily in a rural community. These points are stressed: (1) General adaptability makes for easier adjustment. (2) An important factor in adaptability, in this situation, is to understand how farmers live. (3) Complaining usually aggravates a difficulty instead of clearing it up. (4) Because of their experience with animal breeding, the attitude of farm people toward reproduction is quite different from that of urban people. (5) Consistent and carefully-thought-out ethical codes make adjustments easier. (6) Employer and employed have mutual obligations which each must take care to observe.

Farm Mechanics. — Conditions make it extremely important that urban boys know some of the basic principles with regard to the preservation of the machinery which they may be required to handle. "When in doubt, turn it off," as a rule; attention to lubrication as the first must; and the fact that tractor operation is different from automobile operation are among the generalizations stressed.

Crops and Soils.—In this section

of the seminar attempts are made to familiarize the boys with the varieties of soils and crops found in southern Wisconsin,—with the steps, including fertilization, taken in the preparation of the soil,—and with the planting, cultivation, harvesting, and marketing of crops.

Dairying and Animal Husbandry.—The purpose of this section is to teach the city boys something about the many kinds of animals to be found on a farm and their importance and use, with especial attention to dairy cattle. Attention is paid to the various identifiable breeds of horses, cattle, hogs, chickens, sheep, and other farm animals. They learn that rural people put them to use according to certain characteristics; that dairy breeds and beef cattle differ from each other and among themselves. They learn the importance of sanitation in connection with the production of milk and cheese, and they learn enough of the marketing of dairy products and meat stock to appreciate that it is a complex process.

It is not the plan of the Laboratory Schools to make this farm seminar a "subject" in which credit can be earned. Rather, boys who wish to do their bit in the war effort are given an opportunity to obtain a helpful background by learning something about farm life. We have found that the motivation for learning the materials taught in the seminar is excellent. Boys who look forward to a summer on the farm are eager to learn about the machinery; the people and the way they live; the animals; the planting, cultivation, and harvesting of crops; and everything else that is associated with their plans for the summer. During spring vacation it is planned to enable the boys to spend part of that week on the farms where they will work.

The writer believes that, even after the coming of peace removes the necessity of helping out the farmers by sending city boys to the country, this plan of providing work experience for urban youth should be continued. There probably is no better way for city boys to sense the farmers' problems than by working for a summer or more on a farm under circumstances that are conducive to penetrating learning.

[*Seth Phelps teaches in the Laboratory Schools of the University of Chicago. Reported from the* School Review, *LI (March, 1943), 144-49.*]

ONE of the lasting effects which may grow out of the present war is the revived dignity which goes with work with the hands.—*Dean L. A. Froman, University of Buffalo.*

THEY'RE IN THE ARMY NOW

J. Robert Sala

In the Junior College Journal

I TEACH in one of the largest "junior colleges" in America. It is the San Antonio Aviation Cadet Center, a vast educational institution for the testing, placement, and pre-flight training of combat flyers. What kind of a school is it that trains these young men of junior college age? What is its philosophy of education, its program? Is there anything new that civilian junior colleges might use?

"Equality of opportunity" for "all the children of all the people" has been much talked about, but the fact remains that attendance at college was and still is conditioned on ability to pay. Here, however, wealth and social prestige carry no weight. All receive the same pay, wear the same uniform, eat the same food, sleep in the same sort of bunks. All have the same opportunities and duties. Army classification carefully sorts out those who show talent and steer others into military pursuits for which they are better suited. Ability and application are the sole essentials for progress. The Army schools enjoy the major advantage of knowing what they are educating for. The Army is spared any long-winded dissertations on the objectives of education. The end product is an efficient fighting man. It is not as narrow an objective as it may seem. Many fundamentals of habit and character are as useful in peace as in war.

Discipline is the first and most important principle of the Army schools. With the cadets, discipline is strict, but it is not a discipline that regiments. Combat today calls for a high type of initiative, an initiative that is responsive to leadership, one that is disciplined to work well and smoothly with others. Flyers fight in formation, and the pilot who breaks formation endangers the success of the mission and the other units of his squadron, each of which depends on the other for security of flight. Like all Army men, cadets grouse a great deal, but that merely means that morale is high. Actually, they enjoy the discipline. Have we of the junior colleges helped our students to achieve the discipline that makes an ordered and happy life?

Skill is the second emphasis in Army education. These skills must have battle importance, of course. Yet many of them are merely special applications of common tool subjects taught in our schools. The big soft spot is mathematics—fully half of the ground-school mathematics course must be given over to a review of elementary arithmetic. The simple skills of soldiering—close and open order drill, guard, the manual of arms—are taught even to budding flyers. The cadet

is taught elementary Army and Navy tactics. He learns how to work with other arms and services to achieve victory. Our job is to turn out soldiers first, then flying specialists. Unity of effort is the result. Should the junior colleges try to produce citizens first, then plumbers and scholars?

The building of *vigor,* abundant physical energy, is a third objective. Anything less than top physical efficiency makes the pilot a menace to his crew and his squadron. Mass calisthenics, taught by the cadence system, insures rounded muscular development. Competitive athletics are of the small-group, light-contact type, such as volleyball and six-man touch football. Alertness and dexterity are emphasized. All must participate. There are no sidelines, or players' benches, or glamorous exhibitions. The athletic programs of our junior colleges have long been designed to please the alumni, the townspeople, and the stadium bondholders.

The program and organization of pre-flight training are simple. Half the day is given to classroom instruction and the other half is under the direction of the tactical and physical training departments. Cadets who fail a final examination are given one make-up test. If this, too, is failed, the cadet is "held over" for the next cadet class and repeats the subject. Only one hold-over is allowed during his entire flying training period. Failures are reclassified and placed in another branch of the service for which they may be better qualified. After the completion of a nine-week course, cadets go on to primary flying training. The daily program is very full. Open post is given once a week—maybe. Cadets can attend the post movie for 12 cents; and in this war, the soldiers see the new pictures first. A spacious recreation building attracts many. However, unless the cadet is a facile student and adept at dodging "gigs"—a demerit which means "walking the ramp" for an hour with gun on shoulder—he is not likely to have much time for extracurriculums.

Underneath all the training is a feeling that the time is very late—none must be wasted. The instructor feels this especially. He is preparing the cadet for the ultimate final examination in the sky. As he stands before his class he feels his own responsibility for victory—he knows he must not fail.

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THE YOUTH SERVICES OF THE NEW DEAL AND FUTURE ACTION

JOHN W. HERRING

In Social Education

CCC is gone. NYA has been narrowed to certain specialized tasks. WPA is a shadow. There may be considerable disposition to say, "That's that; the need is passed. Let's drop the argument about these agencies and forget them."

But there are plenty of good reasons for not forgetting them. We may quite possibly have an army of 8,000,000 unemployed youth after the war. We will in any event find ourselves subject to the extraordinary stresses that affect youth far more sharply than they affect the rest of us. Youth under the strains to come might seek fascist escapes as the result of frustration. Or youth may rise to the challenge of new world-building. Certainly the burden of building the post-war world will fall most heavily on young shoulders and young minds possessing an elasticity that has gone from many of us older ones. Thus the spotlight will inevitably be placed on youth in the peace as it is now placed on youth in the armed services. We shall find need to recreate our youth services on a huge scale. We shall then have great need to profit by the lessons learned from these vanishing programs.

The chief lesson, I think, that CCC, NYA, and WPA taught us was that youth service agencies must be built around a more dynamic social or "citizenship" purpose than was apparently possible in "relief" or semirelief programs. Citizenship training in its broadest and richest sense marks the spot of our worst failure.

It was an inspired idea to convert our economic adversity into an occasion for great social educational measures. The greatest of these measures of course would have been to train the shock troops of the new democracy, the democracy that must go forward in the midst of a world turned backward. The NYA, the CCC, and the WPA educational projects were dedicated to citizenship, and to other things—relief, jobs, conservation. The "other things" won. They won every time—in the words we put into Congressional acts, in the people we picked to run these programs, in the way the infinite detail of the job was handled. And they won hands down. Citizenship education, instead of rating first, came through a bad last.

The National Youth Administration.—The NYA was born of a deep devotion by national leaders to the well-being of millions of youth, out of school, jobless, dispirited. In its general program it has done a job in which enthusiasm, originality, and the human

touch have, to a surprising extent, offset the weakness of a service so hastily thrown together by so oddly assorted a crew. NYA's mistakes have been grievous, but it has been alive, it has been valiant, it has pointed the way to important future services to youth. The sharper the pity then that NYA's work for the training of youth and citizenship has been so unimpressive. NYA has met youth at the zero hour of entering voting citizenship and has fallen tragically short of its extraordinary opportunity.

Consider the set-up: NYA has been by definition a method of putting unemployed youth to work, part-time, and of providing a limited stipend, frequently an extra slice for families on relief. There has been some job guidance and a fairly impressive record of job placement, and there has been "related training"—related, this is, to the job. This training has been partly farmed out to schools and other agencies. Oftentimes the job has been set up by NYA in a work center and the youth receive some instruction on the job by NYA "foremen." This, except for NYA financial subsidies to high-school and college students, is the master blueprint. This is an important program. But a youth is more than a job hunter. He is about to vote, about to pick a mate, about to play a part in the adult community.

The NYA "center" is a "natural." It furnishes a chance to help the young citizen to find himself through selfgovernment, through reading and discussion, through work, through democratic living, through sharing in community tasks. The gates are open to stimulation, to information, to ideas. It's the kind of spot where youth can hammer out a philosophy, pour the solid foundations for a lifelong democratic faith, and win his way to a working knowledge of the real stuff of our country's political, social, and economic problems. The most discouraging fact in the picture is that NYA does not seem to have recognized the real thing when it has met it. A Nazi leader in the same situation would envelop youth with propaganda. Our democracy is tragically hesitant about feeding youth the strong meat of democracy.

The Civilian Conservation Corps.—The layman's picture of CCC is of fine upstanding youth with straight, brown, muscular backs, swinging the mattox and building roads and dams in the great educative out-of-doors. Straight backs and nature's ozone are only a fragment of the story. The CCC touched much the same group as the NYA—a bit less privileged perhaps. It had the same chance to use the neglected years to make vibrant citizens, and succeeded less well. The root of its failures was lack of democracy. True enough, on the job side it was more efficient than NYA. Its failure was on the

human side. Against the NYA records of selfgovernment in the majority of its centers, few if any CCC camps were democratically organized. Moreover most of the regular Army and reserve-officer personnel had little sympathy with selfgovernment. Educational facilities were secured with difficulty and were generally unsatisfactory. Vocational training in CCC improved, but CCC remained basically unchanged. Yearly it had to its credit more lands transformed, more swamps drained, more parks built. But it did not transform people. It suffered with the myopia that has ailed NYA, but in worse form. It dealt with jobs, with relief, with discipline, with strong bodies. It did not deal with the citizen and the man. With my fellow Americans I am tremendously for our army. But I think CCC was not its realm. Vice versa, I would deem it a grave error to turn national defense over to the educators to run as an experiment in selfgovernment.

The Work Projects Administration.—We found in a study of two eastern cities that the WPA educational program dealt largely with young people—the median age of students was 22. WPA was an act of faith, backed by cool billions, that the unemployed could render important services in art, education, and building. This despite all difficulties, was richly vindicated. But WPA also taught us our sharpest lesson, namely: You cannot deeply rehabilitate a man if you mark his forehead with the scarlet letter of relief. Strange is the picture. These men and women who today are inducted to defense industry as to a knightly service, were made to blush as, yesterday, they took on the roles of artist or teacher. WPA has been a tremendous humanitarian measure, but it has been weakened at the core by its apologetic philosophy. Able men went into WPA education with high hopes. They became disappointed and got out. For WPA, educationally, has not really meant business. It has been a stopgap affair. It has doused enthusiasms as if it were an incendiary bomb. Employes were told to be grateful, not ambitious.

Is a youth program any longer necessary? There are those who would wipe the entire program off the public slate. To do so, I am convinced would be to stage a moral retreat of the most tragic order. A tremendously difficult tomorrow is coming up. Youth needs help, and friends. And the help and friendship must be built into a plan that reaches them all. Should the federal government do the job? Is it the job of the schools? Can we not hammer out a cooperative program and policy by which we, the public, may employ both federal and local forces to do the job that needs to be done? Education must move into the thick of things. It must be unafraid. And it must pick the

main chance—the chance called "youth." Young men and women under 25 and other youth pressing on their heels are this country's main chance. By the generosity of an abundant land we older Americans have been able to afford our failures. Not so our youth. For a new world is coming up behind the thunder and the flame, a world in which the free must also be the wise if freedom is to be. They must be more than we—keener in social skills, more capable of shaping our people's destiny by conscience and by brain.

The sum of past experience with NYA, CCC, and WPA seem to warrant these general conclusions:

1. The interests and skills of both the educator and the layman should be represented on a *government joint youth commission* in Washington charged with the administration of a rounded national youth program.

2. Similar commissions should be formed on both the state and local levels, providing greater *authentic participation* by both schools and lay community groups in planning and executing the youth programs.

3. The program would be implemented with specialized personnel assigned (*a*) to encourage youth participation in community affairs, i.e., citizenship education, (*b*) to provide work experience, (*c*) to provide job training and job placement.

4. The relief principle should be completely eliminated. All youth should be included.

5. Youth Councils should be formed on both the state and local level to serve in a *bona fide teamwork relationship* with the adult commissions. Youth's share in planning and in selfgovernment should be accented throughout.

6. The basic description of the program should be *service by youth*, not *youth service*. Paternalism injures youth. The challenge to responsible service unlocks extraordinary energies.

7. It is all-important that we *start now* on a new youth program designed to help youth play its greatest role in the war effort and to prepare for the days to come.

[*John W. Herring is Director of the Section for Citizen Unity in the New York State War Council at Albany. Reported from* Social Education, *VII (February, 1943), 51-57.*]

MEXICO has taken a significant step forward in the field of public education, adding to progress already made in providing its people with facilities for learning. Basic textbooks in all public schools will now be issued free.

A TIME TO SERVE

HERBERT CARLETON MAYER

In the Educational Record

IT is painfully trite to affirm that this is an "all-out war"; but that term fits. Not only is everybody and everything in danger of attack, but to win this kind of war it literally requires the effort of all. This is a phase of the present conflict that we have been reluctant to recognize. The Army and Navy have slowly been convinced that this is a new kind of war. Industry and commerce are on the way to learning it. The politicians and bureaucrats show little or no signs of such awakening in their actions, though they use it for the text of their speeches. And sad, but terribly true, is the fact that higher education shows scant realization of the implications of "all-out war."

Yes, we talk about it, discuss it, teach it—everything but do something about it. Certain graduate schools have become centers of research for war effort. Some universities have rented the Army and Navy their dormitories and athletic facilities, thereby lightening their own financial burdens. A few colleges are training relatively small groups of technicians. But the great volume of training for war, both military and industrial, is being done by the Army and Navy themselves, by some engineering and proprietary schools, and by public secondary schools. Whether we like it or not, it is lucky that they are doing the job, for what would have been accomplished if it had been left to the colleges and universities? With the greatest training job in history facing the nation, we, who are supposed to be professionals in the education of young people, are doing so little that it is pitiful. The reasons for this situation are not too hard to find.

There is some reason to be found in the failure of military and naval authorities to make use of the enormous facilities of colleges and universities. Those who hold high office, naturally, are graduates of the military or naval academies. Their training is technical, and perhaps narrowly technical at that. They have no knowledge of liberal education, nor understanding of how it can be used. The relatively few officers in authority who understand higher education are either unable or unwilling to insist on practical use of the colleges. Whatever the reason, those who control our war effort and manpower problem cannot exonerate themselves from the blame of ignoring the greatest existing system of training men.

But the truly unpardonable sin has been committed by us who are administrators. We have been so engrossed in the effort to save our institutions that we have missed the greatest chance of our century to

prove the practical efficiency of higher education. Of course there has been plenty of speech-making. Most of us have propounded a lot of pompous tommy-rot about the general values of a college education. Some of us have announced our intention of holding ourselves above this sinful war so that we might have clean hands to organize the peace. Some of us have wangled political influence to snatch a few crumbs from the tables of the masters to keep our institutions operating. Far too many of our committees and conferences have been devoted to crying that our institutions must not be disturbed. We must have help but it must not be federal aid lest we lose our freedom; it must not be another S. A. T. C. lest we injure the life of the campus; it must not interfere with schedules or courses lest it disturb academic patterns; and certainly it must not upset the social and athletic affairs of the campus lest it undermine the morale of the Nation.

History has taught me this much, at least, that institutions adapt themselves to serve their times and circumstances or they die. To put the issue bluntly, that is our choice. If our colleges and universities do not find a way to serve unselfishly and intelligently, they will deserve to go down helpless casualties unfit for the demands of a modern national crisis. Here is a situation in which the products of education are more in demand than ever before. The Army and Navy need officers, technicians, and specialists, industry needs more and better trained workers, and schools need teachers desperately. That sounds like a job for education, an enormous one. Let's get at it!

There is no great mystery about any type of specific training. A good job analysis, determination of training units, and the establishment of methods and materials with which the training is accomplished—such is the formula. But, like manufacturers and other civilians, we shall have to take the initiative. It was the operators of civilian flying schools who persuaded authorities that they could do the job of primary flying training, and got the authorities to give them a trial.

Our own failure to secure specific assignments from the Army and Navy arises from our attitude and our ignorance of what must be done. Of course, we will have to give up general training in economics and train men for specific tasks as clerks or supervisors, or technicians. The same applies to chemistry, biology, geology, physics, languages, or history. I am convinced that a dozen of us who know both the Army and the college, could, with reasonable cooperation, produce programs that would capitalize the education facilities and personnel throughout the Nation, and immensely relieve the burden

on the training units of the armed services.

There is, moreover, a job of training men and women for industry and business. Authorities have estimated that industry must replace more than 4,500,000 who will be taken for military service this year. Training that many people even for simple jobs is a huge task. No, it is not college training, but the Nation needs it. Can't education adapt itself just as well as industry?

Almost as big a job is that of providing the school of the land with teachers to keep these vitally important units of our national life functioning efficiently. Someone has estimated that the public schools will need 100,000 replacements this year. Thousands of present teachers must be retrained to teach new subjects. Much of this work will have to be intensive, high-pressure effort to get people ready as fast as they are needed. The alternative is to throw away all standards for teachers. There is enough room for ingenuity right here to keep most colleges busy.

Then there is the regular task of educating thousands of young men and women just below draft age, and those who will be able to continue to graduation. Accelerated programs, carefully chosen courses, redesigned requirements, and specialized training demand the best thought and effort of college administrators. Right now is the time to organize our colleges so that they can do a highly efficient job of preparing young men and women intellectually and physically to do their part in the war. If we fail to do that, we fail utterly, whatever other supplementary tasks we undertake.

We have turned to the engineer to use his skills in the war, to the metallurgist to develop metals for new tasks, to the chemist to evolve new formulas. Why isn't it just as logical to ask the educator to provide training to fit new needs? Let's prove that we are equal to the challenge in our profession, as other workers are in theirs! Sure there will be troubles and headaches. There will be anyway, so what is the difference? The present crisis offers the grandest chance to prove the everlasting worth of higher education. In the national crisis when our very existence is in the balance, colleges have more to win than to lose by "all-out" service. If we have to cut corners, or put academic traditions in mothballs, or perhaps break some hearts, isn't the job worth the risk?

[*Herbert Carleton Mayer is President of Parsons College. Reported from the* Educational Record, *XXIV (January, 1943), 5-13.*]

MOVIES MAKE FRIENDS

F. Earl Williams
In the School Executive

A WISE man has observed that he who has reason on his side need not speak in a loud voice. It is true that a loud voice is not necessary or desirable in bringing your school into public focus, but an interesting, realistic, and persistent voice is one of the "musts" in these days of organized pressure groups. School objectives, methods, courses of study, vocational training, equipment, extracurricular activities, new teaching devices, pre-military preparations, etc., should be properly understood by the supporting public. Therefore, one of the primary duties of a school executive should be to use every effective method at his disposal to interpret and bring the essence of his school in action to his community. Unquestionably, the most potent and adaptable medium for doing this is the moving picture. In this mechanical marvel we have a device that possesses unique advantages for promoting the right kind of publicity. It has universal and instant appeals; it is easily adapted for any audience; the material is highly concentrated and realistic; parents, students, and teachers take personal interest in it. The moving picture of a school system in operation is decisively superior to the routine annual school report which few read and no one thoroughly understands. It actually makes friends and influences people. The following suggestions may aid in the use of moving pictures to bring the school to the people.

At a teachers' meeting the project should be thoroughly explained and teachers should be urged to work out two-minute sequences showing some characteristic phases of their classwork. Plan to film the various sequences in order as far as practical so that time will be saved when it comes to getting the film into proper continuity. Such scenes as these are suggested: (1) some interesting angles of the school building; (2) the school committee in session, with a close-up of the superintendent; (3) the faculty chatting together; (4) the school nurse and doctor at their work; (5) the student council in session; (6) many classroom scenes in which students are using visual equipment; (7) the dramatic club putting on a play; (8) girls' chorus singing; (9) a fire-drill sequence; (10) the school janitors at their work; (11) a typical school party; (12) a cafeteria sequence showing preparation of food, serving, and eating; (13) the school magazine staff preparing an issue; (14) the school band marching by; (15) physical education in its many forms, including a few exciting shots of a football game; (16) classes taking field trips to a factory, bank, waterworks, or police

court; (17) various club shots, such as one in which girls give a tea for mothers; (18) a statement of the school's objectives followed by shots of a graduating class in cap and gown; (19) a good closing shot of the school seal and motto with a double exposure showing students pouring out of the building at the close of the school day.

In shooting, use all the daylight and artificial light you can produce on all inside shots and measure light values with a good light meter. Have the students taking part in a scene practice their action several times under the flood light as you plan interesting angles and correct distances for the camera. Get as close to your important action as possible. Never use your camera without the tripod. Don't scrimp on film. Use a few extra feet so that you have enough latitude to cut out all doubtful footage without shortening the film unduly. Set your camera for 16 exposures per second if you want to economize on film. For more professional results take your pictures at 24 exposures per second and then, of course, you can run your completed film at sound speed when projecting. Skilful and ruthless cutting can do much to give your completed pictures force and effectiveness.

The premier showing of the film should be at a parent's night. The enthusiasm engendered by this type of program is sweet recompense for the hours of work involved in its creation. Another important showing is the one in April for the class that will enter the high school the following September. This comprehensive picture of all the school has to offer is an invaluable aid for those young people who are attempting to make wise choices on their election cards, and who need general orientation. Other obviously desirable audiences are service clubs, church clubs, chamber of commerce, city council, parent-teacher associations, and class reunions. After the first showing I can guarantee you will receive plenty of requests for the film. But one final caution—do your own showing. This film is too valuable for unsupervised use.

[*F. Earl Williams is Principal of Gardner High School, Gardner, Massachusetts. Reported from the* School Executive, *LXII (March, 1943), 48-50.*]

DISTRICT of Columbia school gymnasiums are used as lodging places for servicemen from Saturday night to Sunday noon.

THE ARMY'S PERSONNEL TESTING PROGRAM

JOHN R. CRAF
In the Clearing House

THE development of "blitz" warfare involving the airplane, the tank, heavy artillery, anti-aircraft detector devices, and other complicated instruments of destruction or detection has revolutionized warfare and necessitated the accurate assignment of army personnel as never before. Because this is mechanized warfare and because the demands from a thousand and one varying trades and occupations must be met, this war has taught us the necessity of testing and classifying our manpower as carefully as we test the physical materials and machines of our complex technological world.

During the years intervening between World War I and World War II, Congress and the War Department were not inactive. When the Selective Service and Training Act of 1940 called citizens to active duty in the military forces, the groundwork for handling newly inducted men had been laid years before. The War Department had revised the Soldier's Qualification Card, on which is entered and coded the personal history concerning the soldier's family, education, occupational experience, linguistic ability, and previous military experience. To profit by the lessons learned in World War I, the Department sought the advice of the Committee on Classification in developing a good test for use when draftees first reported to Reception Centers—a test by means of which recruits reporting for duty could be sifted into a few general groupings for training purposes.

The test constructed, now referred to as the Army General Classification Test, was drawn up to test recruits with respect to their ability to learn quickly the duties and responsibilities of a soldier, and cannot be considered a test of mental abilities. It is not an "IQ" test, nor does it indicate such factors or qualities of leadership, etc.; and it is not a measure of advanced educational training.

The test is divided into three distinct subdivisions: vocabulary, arithmetical reasoning problems, and block counting. The first two test a man's ability to learn, but the results are of course influenced by what a man has learned. The block counting division more closely approximates a test of abstract mental ability and the ability to reason out a situation. The participant sees before him in picture form a series of blocks, so grouped that all blocks are not shown. In determining the number of blocks in the pile it is necessary to employ imaginative and reasoning powers. To overcome difficulties met by those handicapped by lack of knowledge of English the "2abc" non-language

test was developed, which minimizes the use of language and written instructions and wherever possible makes use of pictures.

The Army General Classification Test consists of 150 questions and is usually given to large groups at the same time. The test is of multiple choice construction and separate score sheets are provided each person being tested. These score sheets are tabulated by electrical tabulating machinery and the score of the test is obtained and recorded before the selectee is interviewed. Undoubtedly scores have been influenced by several factors which may intervene, yet within limitations the test is fundamentally sound. Some of the factors which may cause lower scores than might otherwise have been recorded are: (1) Tests may follow inoculations when men are mentally or physically upset. (2) Time allotted for test is cut short. (3) Men out of school for a number of years are not conversant with new-type tests.

During the year ending February 28, 1942, the Army General Classification Test was taken by 713,000 men. Results in percentages follow: Group I (Very Superior) 8; Group II (Superior) 29; Group III (Average) 30; Group IV (Inferior) 21; Group V (Very Inferior) 12. Men in Group V make loyal, efficient, and trustworthy soldiers. The main difficulty they present to the Army is that more time must be devoted to their training.

After the men have taken the Army General Classification Test and have been interviewed, aptitude tests are given to men who have made grades I, II, III, or IV, and who have not been classified and assigned as military occupational specialists or chosen for special training. Army personnel authorities require that these tests be taken before a man is ordered from a reception center to a special service school so that those who do not show that the course can be completed successfully may be weeded out. The aptitude tests are of two types, and are called The Army Test for Clerical Aptitude and the General Mechanical Aptitude Test. Scores on these tests are predictive of the enlisted man's probable rate of learning, and if a favorable score is obtained he will usually succeed when trained in a particular line of work. These predictions are of course in terms of probabilities of success, not of certainties. They are of the greatest value when considered with other data about the enlisted man, such as information as to his schooling, previous occupations, general classification test score, and so forth.

The Army Test of Clerical Aptitude measures the relative speed and accuracy with which the enlisted man can complete various clerical tasks. It consists of 280 items of six types: checking, coding, checking catalog numbers, reasoning, vocabulary, and number check-

ing. An instruction and practice period precedes the test, which should be completed in 20 to 25 minutes. While the General Classification Test provides a rough index of abilities, the clerical aptitude test furnishes a more precise and discriminating measure, and a high score is a relative indication of a good clerk. A low score does not mean that the man cannot succeed in this work but that his chances of success are lower during the uniform period of training, which the Army, dealing with large numbers of men, must establish.

The Mechanical Aptitude Test measures the enlisted man's abilities to think through problems of the relations of mechanical parts to each other; space thinking such as is required in learning to read blueprints or to translate two-dimensional data into three-dimensional form; and shop mathematics. The test obviously measures primarily academic mechanical ability, and actual mechanical performance is not involved. However, the test is a good indicator of potential mechanical ability. The "over-all" time for this test is approximately an hour and ten minutes, which includes the necessary time for instructions and practice, distributing and collecting papers, and moving the men in and out of the room.

The Army's testing program is in reality one of the links in the chain of proper classification of men inducted into the Army of the United States. It is perhaps the first link in the chain, for the General Classification Test permits segregation into five groupings and provides the interviewer and classifier with a general idea of the mental capabilities of the soldier. The results obtained from the tests must be considered together with all other information concerning the selectee. The tests alone are not true evidence of the soldier's mental qualities.

[*John R. Craf is Associate Professor of Military Science and Tactics in the Graduate School of Business at Stanford University. Reported from the* Clearing House, *XVII (February, 1943), 323-26.*]

TWO senior boys wandered into the principal's office recently seeking guidance on how to become Army generals. —M.W.D. in the *Clearing House.*

IQ SKULLDUGGERY?

HELMER G. JOHNSON
In School and Society

THERE seems to be a general tendency among research workers to overlook the fact that an intelligence test is merely an achievement test. Mental-test makers have tried, with only partial success, to include in their tests only items that everyone has had an equal opportunity to learn and thus eliminate the factor of training (environment). Then, as one psychologist puts it—commenting on investigations now being made—"Having tried to eliminate the effect of environment on the IQ, we turn about and study the effects of environment on the IQ."

Iowa investigators, for instance, have found that when young children are taken from orphans' homes and given nursery-school training, notable gains in IQ result. Minnesota investigators have found that when children are taken from good homes and given nursery-school training, only slight gains in IQ result. These investigations indicate that an orphans' home offers little opportunity for children to learn skills and knowledges necessary to good performance on an intelligence test, while the opportunity to acquire these skills and knowledges in good homes is only slightly inferior to that afforded in nursery schools. There is nothing conflicting in the results of the two investigations.

Nor is there anything especially hallowed about the constancy of the IQ. Constancy in traits and abilities on the part of children is a rule, not an exception. It is not only in mental-test performance that children are constant. The writer found a correlation of .72 between the hours a week spent in home study by a group of high-school pupils and the number of hours a week spent in home study by these same pupils a year later. Habits, it seems, may be nearly as fixed as innate capacities.

Apparently no one has thought it worthwhile to determine the constancy of the EQ. It should not surprise anyone to find that it is nearly as constant as the IQ. Children near the top of their class in Grade III will likely be near the top in Grade VIII or Grade XII. Teachers find it just as difficult to raise the EQ from 75 to 100 as Minnesota investigators find it to raise the IQ from 75 to 100. A thorough investigation indicating that the EQ is about as constant as the IQ might do a great deal toward dissipating our reverence for the constancy of the IQ. Certainly there is no reason why we should assume that the IQ is a measure of innate capacity merely because it is fairly constant; it might be merely a measure of habits and be just as constant.

The doctrine of mental discipline does not assert that we can

make gifted children out of morons by proper training; it asserts that we can effect a gain in our mental resources, within limits, by training. As an intelligence test merely measures accomplishments, the use of the IQ as an inedx of mental ability when we wish to study the effect of training on this mental ability is extremely questionable. Thus we have little right to assume from the Iowa studies in which the IQ was raised from below 100 to 116 that the mental ability of these children was improved by an equal amount.

What proof have we that the IQ is an index of intelligence? We have *assumed* that intelligence tests measure mental ability.

The assumption that intelligence tests measure mental ability is based mainly on the fact that these tests correlate highly with school achievement. Mental tests that do not correlate highly with school achievement have been found to be of little value, and consequently mental-test makers have selected items for their tests that have a high correlation with school success. Since the items selected are highly related to school achievement, they are to a large degree affected by the same factors that affect scholastic achievement.

If we are to use scholastic ability as a standard to validate our intelligence tests, why not use the standard itself as a meaurse of intelligence? In other words, why not use general school-achievement tests as an index of mental ability? Since school environment throughout our Nation is probably more nearly uniform than environment outside the school, we can justly claim that the factor of environment has been eliminated to at least as high a degree from our school-achievement tests as from our intelligence tests.

As a result of the practice of including mainly such items in mental tests as correlate highly with school achievement, our intelligence tests are to some extent tests of scholastic achievement. Consequently the IQ and the EQ are pretty much the same thing, based on somewhat different tests of scholastic ability. The writer believes that for most purposes the EQ is superior to the IQ, as it is based on more practical and sensible items. Ordinary school-achievement tests do not require a pupil to unscramble disarranged sentences or to cross out one of four words that does not contain the letter "o." Such items may test abilities that have little practical value. Because intelligence tests often measure irrelevant abilities, general-achievement tests have proved slightly superior in predicting future scholastic success and in classifying pupils. This has led men like Stoddard and Witty to recommend that the use of intelligence tests be allowed to decline.

If we kept in mind the fact that

intelligence tests to some degree measure scholastic ability, we should not get peeved when other investigators find that children taken from the barren environment of an orphans' home make notable gains in IQ when given nursery-school training. Nor should we make the error of inferring that such gains in IQ imply similar gains in mental ability. The inference, based on IQ studies, that children below average in mentality will develop into bright children if placed in a stimulating environment before they are two years old, is IQ skullduggery at its worst.

Changes in IQ are no more significant than changes in EQ. To the classroom teacher, they are far less important. Which should you rather do, improve your ability to read and to solve arithmetic problems or to improve your ability to untangle scrambled sentences and to cross out the one of four words that does not contain a letter common to the other three?

[*Reported from* School and Society, *LVII (March 6, 1943), 269-71.*]

Current Quotations

EDUARD LINDEMAN, New York School of Social Work: "Recent tests given young German prisoners in Canada show that, while they have high mechanical skill, they have little knowledge of cultural subjects and the social sciences. Furthermore, these young Germans have little or no initiative. They have to be told how to think, how to make their moral choices. Most of them never heard of Wagner. They have almost no knowledge of art, music, and the many things which add to the finer side of life."

LT. GENERAL BREHON SOMERVELL, Commanding General, Services of Supply: "We have prepared the greatest single long-range educational program ever set up in a single generation and have done it in a few short months. I refer to our training program in American colleges and our pre-induction courses in our high schools. The latter, already functioning, will save millions of man-hours of instruction of new soldiers; the former will provide the technicians and specialists we need in mechanized war."

WHY CHILDREN READ THE COMICS

RUTH STRANG

In the Elementary School Journal

THERE is plenty of evidence that children read the comics. In a metropolitan department store a Christmas display featuring a comic-book hero outranked Santa Claus in popularity. Between 10 and 12 million copies of a hundred different comic books are sold each month, and in many communities children extend their purchasing power by a cooperative exchange system through which each child buys a different magazine and trades with other children.

Much has been written in favor and against the comics. Many adults are concerned about their children's interest in them. The children themselves think that parents take the subject too seriously. Said one, "We should be allowed to relax the same as adults do," and another even recommended them for adult reading.

In a study made by the writer and some of her students it was noted that boys of six to nine are likely to choose for their comic reading such heroes as Superman, Dick Tracy, Joe Palooka, and excitement and adventure with little concern for realism. Girls of the same age tend to prefer comics featuring pretty women, children, and animals, such as "Winnie Winkle," "Blondie," "Little Orphan Annie," and "Peter Rabbit." Boys of 10 to 13 tend to increase their interest in hero worship and the mystery strips, while the girls continue reading their earlier favorites but begin to show an interest in the opposite sex. In the lists of favorite comics reported by the adolescent boys, adventure and mystery still lead, whereas the interest of adolescent girls shifts definitely away from children and animals to teen-age and adult characters. Opinions regarding *True Comics* vary. Many children like them, but others, including adolescents, think they are "not funny enough," are "too long," or "boring."

Children and adolescents, questioned about their reasons for liking the comics gave many reasons. Many expressed interest in the story element—in the adventure, suspense, and plot. Slightly different are the comments which indicate a need for adventure denied in real life. One eight-year-old girl said, "I like Buck Rogers because he is tall and handsome, because he and his sister can fly as I should like to be able to do, because they do good to good people and do harm to bad people, and because they have adventures and that's what I would like." Yet others prefer comics of a more realistic type. One ninth-grade pupil described "Gasoline Alley" as a "human story that is down to earth." It is the serial nature of comics which attracts

some children. They look forward to reading more about the hero's exciting adventures each day or each Sunday. Obviously the humor is a feature of some comics which appeals to children but they differ widely as to what is "funny." A few children mentioned the art value and pleasing colors of their favorites.

Some of the children mentioned as reasons for liking the comics that "they are easier to read than books," and one said, "They do not overtax the mind." A few older pupils mentioned the educational values, suggesting that the comics teach nature, biography, science, geography, history, and patriotism. Some of these may have had *True Comics* in mind. The comments, "They help my vocabulary," and "They help me to write themes," might, however, be true of any of the comics. Mention was also made of the moral values of comics: "They teach respect for law." "They teach that crime does not pay." This serious attitude toward the comics is not common. The majority of children read and forget them.

Although the opinions of the children and adolescents studied were preponderantly in favor of the comics, there were a few dissenting voices. Those who expressed no interest in, or even a dislike for, this form of recreation were usually good readers. They preferred books to comic magazines and had easy access to books. As children grow older they tend to take the attitude that reading comics is "kid stuff." They recognize more clearly that the plots are weak and improbable, and the characters unreal.

Adults should advocate moderation rather than total abstinence with respect to the reading of the comics. They should recognize that the values of the comics differ for individual children. Undoubtedly they meet needs of certain children at certain stages of their development. Thus they serve a useful transitory purpose, often stimulating an initial interest in reading and leading to the reading of books, which although of increasingly better quality, have the comics' appeals of adventure, surprise, plot, life-like characters, humor, and action. Realizing the power of the comics, the dissenting educator might wisely turn his objections into a positive program for their improvement and untilize them as one avenue of education. He should work with, rather than futilely against, the comic-strip artists and thus mold this naturally attractive medium to educative purposes.

[*Ruth Strang is Professor of Education at Teachers College, Columbia University. Reported from the* Elementary School Journal, *XLIII (February, 1943), 336-42.*]

THE 5A'S STRIKE OIL AND SAW WOOD

MAUDE B. LOWEN
In Science Education

THE subject of the new unit was oil and it looked like a case of study the book and hope for the best. The children in 5A had done more or less traveling but oil regions seemed to have been on nobody's itinerary. In a preliminary overview of the unit they planned five sub-topics, the last of which was uses of oil. It developed that, besides gasoline in motors, many of them were burning fuel oil in their homes. Questioned about its transportation, someone mentioned a pipeline. Suddenly Roger arose and walked up front—Roger, to whom all the three R's were equally and woefully difficult.

"I was down there," he said. "I don't know what state it was. I didn't see no oil wells, but I seen 'em laying a pipe-line."

The class leaned forward, breathlessly disregarding the grammatical errors, carried away. Roger talked rapidly, with gestures, pacing off the ditch, rounding his arms for the pipe size, sweeping them across the ditch to show the wood supports. His audience was there with him as he talked about making joints tight, lowering the pipe in sections, filling the ditch in. Questions shot up and answers quickly shot back. The whole incident ended with a sighing return to reality followed by a storm of applause.

At one point Roger had put his hand into the sand table, using the sand to illustrate a point. Now somebody said hesitantly, "We could build an oil field there."

Ralph, the usually inattentive, became excited. "I've got an erector set," he said. "I know how to build a drill. The book shows."

"I've got one, too—and I—and I," came various offers.

Within a few days the sand table bristled with derricks. A railroad with tank cars was added, and storage tanks. The class unearthed a hand pump that had seen service pumping water over dikes in a former reincarnation of the sand table as Holland. It took days of thought and experiment to adapt the pump to Ralph's electric motor and to adust the mechanism so that it would pump, from a shallow tub sunk in the sand, the black and realistically smelly pint of discarded motor oil John had brought from home. Absorbed groups hung around the sand table watching, suggesting, trying out ideas. They came early, with difficulty were pried loose at tardy bell for other lessons, with difficulty shooed out for recess or home. Then one day, no one knew quite how, some final slight adjustment brought success. Slowly the flywheel began going around by itself. A full black stream of oil came more and more steadily from the pump as the piston

traveled up and down. The well pumped on and on. Everybody became as excited as is usual on such occasions. At last the 5A's had struck oil!

Meanwhile boys from other rooms had been drawn into the problem; junior high school boys once dropped in from a nearby school. Teachers of other grades stopped by, and the supervisor of science made a long drive to watch a demonstration being made before another fifth grade class. It was the latter who declared that the supervisor of industrial arts ought to see it too. Could not remain until he came?

But the children's faces fell! While the final problems of the oil well were being settled on the sand table the class had not been idle. It was fun, of course—having one's work noticed by supervisors. And the oil well had been interesting. It had been made to work, but now it was finished. In fact a lumbering unit was in full swing and they had already planned no less than a combined camp and sawmill in the table. And their teacher had promised that they could dismantle the oil well that very night. They did hold it over a few more days, however, but 30 minutes after permission had been given to clear away the oil field, the sand table had acquired a cook shanty and a bunk house, while beneath it on the floor a committee was excitedly discussing the steady growth of a sawmill from John's erector set. Bonnie sheared her doll's hair to produce a lumberjack; Carolyn dressed a cook. Nora produced the best working peavey made with wire and a meat skewer. Alice's father helped her to put hooks on the endless chain that bore the logs up to the mill from the mill pond. Bobsleds, horses, flatcars and trucks, a crane, and a forest backdrop all appeared. Balso wood was substituted for the log because of the dullness of the saw and the colt power—rather than the horsepower —of the motor. Before long the camp was well on the way to the point where a "tree" could be taken through a complete operation from felling to lumber right on the table.

For these two units, at least half the class of all types of behavior and intelligence had brought appropriate material to school, most of it prepared at home, all of it outside of school hours. Those with nothing to bring had contributed labor and advice. There is something about a concrete reproduction which one can handle that kindles the interest and imagination as nothing else does. Someday when these children visit an oil well or a sawmill it will have meaning for them. They now know the problems of moving heavy logs by machinery. They see the value of utilizing the buoyancy of wood in water, or gravity in filling oil tanks and cars from a pipe-line, of suc-

tion in pumping oil. They explain how iced roads in winter, by reducing friction of heavy loads, give winter logging an advantage over summer logging. They know the advantage of floating logs downstream instead of shipping them by train or truck—they tried it out.

A sand table vitalizes a unit so that reading is done with zest. Construction gives such content and familiarity to the vocabulary requisite to a new unit that nearly nonreaders find their references vivid with meaning and therefore readable. This class made bibliographies of available room material, not only locating it from index and contents, but allocating it by topics to the various student groups. They consulted public libraries, home encyclopedias, current newspapers and magazines, and their friends and relations. This research, you may think, is exactly what all fifth grades do and are supposed to do, but in this case they proceeded with independence and initiative requiring little from the teacher except comradely advice and interest. Like a little logging train they were pushing their unit ahead of them. They were, of their own volition, reading to learn.

There is no better solution of school behavior problems than a genuine interest in a school subject. Absorbed children work with such ease and freedom that only organization enough to point the next step is necessary. Parents, too are interested because when a child is really kindled, he becomes a center of enthusiasm which radiates wherever he goes. When parents become interested they help, and the value of this happy collaboration lies in fusing the interest of home and school in the child's development. This cannot be overestimated. Not only do you get better equipment for your sand table, such as a saw that really saws from a son whose father knows about saws, but Daddy is likely to take a quickened interest also in son's fractions or spelling ability, or even his propensity for getting into fights on the playground. This may lead to the recognition of son's inability to get along with other children as a problem with a bearing on his future success in getting along with his fellow workers.

[*Maud B. Lowen teaches in Minnehaha School, Minneapolis, Minnesota. Reported from* Science Education, *XXVI (December, 1942), 193-96.*]

ABOUT 18,500 rural schools are served by Rural Electrification Administration lines.

GEOGRAPHY FOR TOMORROW'S CITIZENS

GEORGE T. RENNER AND ALFRED H. MEYER

In Educational Method

AMONG educators today it is perhaps a truism that the primary social aim of education has become that of training for citizenship. In pursuing that aim, however, we have largely operated on the astonishing and fallacious assumption that training for citizenship need not be based on geographic learning. We have approached the task of civic education almost entirely through the avenues of historical and institutional studies and points of view.

As long as man remained a creature of a narrow locality, living under conditions of local economy and finding his social relations within a small neighborhood, he could perhaps learn enough geography through the very process of daily living to suffice for his needs. But that day is gone. Problems of resource conservation, control of floods, development of industrial power sources, resettlement of populations and submarginal land, redistribution of industries, and the need for national regional planning, all of them intensely geographic matters, press upon us. Under our system of government, such questions are decided by vote; and it is all too apparent that our people are not able to vote on them with anything approximating intelligence. Now the Air Age has come upon us with still more serious implications. The airplane has given man a new mobility from which he has created a new pattern of time-space relations. In these are rooted practically all of our external national and international relationships. Our national behavior with respect to these relationships must necessarily be based on whatever geographical ideas and notions we as a people hold in our heads. This is true because, under our system of government, international policies are determined primarily through the pressure of public opinion. One has but to read the speeches of many of our leaders during the past few years, to examine the record of our diplomatic policies since 1932, or to re-read the files of most of our leading newspapers to discover beyond all doubt how utterly ungeographic has been our national mind.

More geography, however, may not be the answer. Results will depend on the kind of geography taught and the role assigned to it in the curriculum. Our whole social science program has been *socio-centric*. Viewpoints developed in our citizens by such an educational orientation have simply not stood up to the shocks of present-day world affairs. Most of our major problems today have no real historical precedents and most of our institutions reveal glaring inadequacies, hence

historical and institutional viewpoints are not as serviceable as has been thought. Many of our educational leaders, therefore, are beginning to think about a new type of *geo-centric* curriculum in the social sciences.

In the school of tomorrow, we may visualize a far-reaching change with regard to geographical education. The first misconception which will vanish is that geography is a physical science consisting of the study of scenery and locations. In its place, will come the acceptance of the idea that geography is the strategy of men, space, and resources—the very stuff out of which trade and industry, war and peace are made. The idea that geography is a child's subject, a nontechnical and descriptive study which anyone, trained or untrained, can teach, will also vanish.

In the new curriculum, beginning at perhaps the fourth-grade level, children will study community geography. The community will be studied as a social organism with ecological (geographical) implications; as a piece of foundation geography wherein men are using local environmental elements and resources, where the street pattern, the land use, and the whole utilization of space, order, and structural convenience are the visable evidences of man's geography. They will be taught that much of this community structure is faulty, they will plan a better one—one which is re-centered about an airport in deference to the coming air age, or redesigned to provide play and work experience for children, and recreation and community life for adults. A little later we will begin teaching the elemental global concepts necessary for living in the world community. Children will study their own country intensively. They will learn its basic political geography, its outlines of economic geography, its portrait of social and cultural geography. They will see how America's geography in motion has created its history, how its sectionalism has created a great mosaic of cultures, with distinct regional outlines, how its human and natural resources cry aloud for conservation.

At the junior high-school level, we will carry through a single cycle, developmental sequence of world continental studies, Europe, Asia, Latin America, Africa, and the Australasian realm. These years will make the child familiar with other peoples, other cultures, and other economies, and their actual and potential relations to our own culture and economy. They will teach him the kind of geography needed to make a just and stable peace; the kind of geography necessary to maintain that peace in the world; the kind of geography which will serve as a basis for intelligent war strategy when and if future war comes to the American people.

In the high school of the future

we are apt to see real attention paid to the systematic phases of geography. At present, the social science program at this level includes civics, American history, European backgrounds, and problems of democracy. The approach to such studies has been almost exclusively institutional, topical, and historical, without regard for earth-conditioned actualities. Properly approached, however, large portions of these are aspects of human ecology. In a geocentric curriculum, such studies would to a large extent become historical geography, or political geography, or social geography, or economic geography. Such a transformation would not be easy, but it would, without destroying any of the present values of the high-school social studies, give these subjects a unity of meaning and vigor which they do not now possess.

The citizen of tomorrow will live in the same world as that which now exists, but that world will have an entirely new political, social, and perhaps even economic geography. If we meet his needs educationally in an adequate and realistic way, we must teach him real geography, the kind we have never taught in the United States. This geography is a science of men and areas, a genetic and organic study of how settlement patterns and human-use regions have come about. It teaches that a region, instead of being a mere piece of area or a creation of political demarcation, is in reality a social and functional organism. Moreover, it shows that whenever a man-made product or structure is added to a region, or whenever any part of either the cultural or the natural environment is modified, important economic, social, political, and socio-psychological alterations are produced and the course of resulting history is changed. This is, in reality, the study of primary causation and interrelationship in social science. More than that, it involves the centering of educational attention not on human affairs alone, but on human affairs and the environing region simultaneously. It demands that our interests be geo-centered rather than merely topical.

Those who teach tomorrow's geography must themselves be trained in geography; they must be able to see its direction, to perceive its relation to the whole social studies program, to see its contribution to education in general.

[*George T. Renner teaches at Teachers College, Columbia University, and Alfred H. Meyer teaches at Valparaiso University. Reported from* Educational Method, *XXII (February, 1943), 204-9.*]

THE ORDEAL OF GERMAN YOUTH

PAUL HAGEN
In National Parent-Teacher

GOEBBELS and other Nazi leaders have lately become silent with regard to the youthfulness of the new Germany and the enthusiasm and faith of the young people of the Nazi state. Death in the Russian wastes, death in bombed areas at home, slavery in the service of the Nazi war machine—not the old vision of mastery of the world—is what the Nazis now offer to German youth.

A whole generation of German youth has already been more than decimated. What is this generation? It is the male population from 18 to 25 years old. On one point all estimates of losses agree. The losses are primarily losses of young soldiers. It is from men in this age group that shock troops, parachutists, pilots, tank crews, and submarine crews are recruited. This is the generation that was 8 to 15 years old when Hitler came to power. These boys were the first *Jungvolk;* they grew up to be the prewar, the classic Hitler Youth. You have been warned of the danger this generation—infected by Nazi education, promised mastery of the world by Hitler, and lusting for power—presented to the world. Our fears appear somewhat obsolete today. There will soon be only a few males of this generation left.

What about the girls and young women of the same age? From the age of 15 on, the German girl is drafted into the services of the war machine. Like young women of other countries at war, she is called for arduous and dangerous duties; the difference is that she gets no recognition for her services, because the Nazi society is a male society. Strict laws forbid association between German women and the millions of foreigners, forced workers, sent to Germany without their wives. Nazi justice endeavors, in these completely abnormal circumstances, to protect the "purity of German blood," but to no avail. The Nazi substitute for happy family life, at a time when the fathers of the next generation are dying in distant battlefields by the hundreds of thousands, is to offer the protection of the Nazi Party to unwed mothers of soldiers' children, thus preparing recruits for the next war.

Even before the war, the "lost generation" had begun to develop a pattern of disappointment. The glorious Nazi state had become the state of the elder brothers and their parents. They started to be critical in a primitive way; they began to express a lack of confidence in the older Nazi leaders of Germany, to be disgusted with their dishonesty, to hate their bureaucracy.

Now there is a new group, the children, born a few years before or even after Hitler took power.

Since they have seen the fate of their older brothers, it is hard to believe that most of these boys are impatient to take their places in the front lines. They are all drafted for hard work at small pay. They may have been evacuated from bombed areas, or they may be living far from their familites in protected districts. It is significant that there has been a great hue and cry in the Nazi press about increased delinquency among young people. The Nazi party does its utmost for these young people, potential recruits for the Army. They are privileged in relation to the rest of the population; they get more to eat than civilian adults; they are evacuated from areas where there is danger of air raids. But things do not always go according to plan, and it is hard to imagine that these girls and boys will become ardent Hitler Youth.

What about the still young Nazi leaders, those between 25 and 35, the privileged whom Hitler called from the streets into the new power positions in 1932? Many among them will try to fight even after the armies are defeated, their backs against the wall. They will be like gangsters, knowing that they cannot surrender and live. But even among them are those who have lost some of their Nazism and fanaticism; a group that has begun to doubt and to think.

Great wars are great educators as well as great distroyers. Out of the defeat of the Imperial Germany came an anti-imperialist youth in 1918. It did not find enlightened leadership and favorable conditions. Fourteen years later the youth had turned again; it was bitter against the weak democracy under which it had unemployment; it was caught up by Nazi romanticism. Now ten years later, in accordance with the unchanging rule that no youth follows the path of the older generation, a new youth has begun to turn anti-Nazi. In the hour of defeat, the Nazi society will be accursed among German youth.

The essential problem of re-educating German youth after the war will not be how to educate Nazi theories out of them; that will have been done by history itself. I am convinced that the best re-educators then will be the young leaders of the German underground, the only German flag-bearers of a genuine democracy.

[*Paul Hagen is Research Director of the American Friends of German Freedom. Reported from* National Parent-Teacher, *XXXVII (March, 1943), 18-20.*]

CHILDREN'S INTEREST IN THE WAR AND THE CURRICULUM

JULIA WADE ABBOT

In Progressive Education

CHILDREN'S intense interest in the war is shown in many types of spontaneous expression. The dramatic play in the kindergarten and early grades, the pictures that are drawn and painted of bombing and camouflage, unflattering pictures of Hitler and Hirohito, and eager questionings, all evidence the impact of what is happening in the world today on young children. The following questions of children are typical: "How do soldiers make the stuff we gave them into guns?" "How does the sun know we turned the clocks ahead for war time?" "Why don't the Chinese fall off the earth?" "How did the island that the Statue of Liberty is on get there?" "What does 'liberty' mean?" "Why is Africa called 'in darkest Africa'?"

It is obvious that these questions offer possibilities for leads in the natural and social sciences which have broad implications. Certain geographical concepts are understood much earlier because of children's interest in maps of foreign countries and in transportation. Africa and Iceland become very real when a letter arrives from a father or a brother who is living there under such strange and interesting conditions. The basic needs of food and shelter and clothing are emphasized in many striking forms. The problem of the children's intense interest in all aspects of the war is therefore not of "introducing topics," but rather a matter of selection and emphasis.

In order that these vivid experiences may be constructive in outcome, certain curriculum objectives must be clearly kept in mind. Much of the interest of the children is naturally in the dramatic and spectacular aspects of the war. Vengeance on Hitler and the Japanese is substituted for the old type of dramatic play of Indians, pirates, and gunmen. While this type of expression is perfectly natural at this stage and provides an outlet for aggression, it is nevertheless true that we need to balance the spectacular and unusual with more constructive types of curriculum activities. Extreme nationalism is natural in early years—to the five- and six-year-old, people are either "goodies" or "baddies." But the child does not automatically shed this attitude toward other people when he becomes older. It is thus the responsibility of the teacher to find ways in which more constructive attitudes may be developed gradually without trying to impose ethical concepts which are beyond the children's comprehension. It is essential for us to realize that in times of war one must preserve

those values that are constant in war or peace. Amid all that is confusing and unusual there are leads for emphasizing such democratic principles as the worth of the individual and the brotherhood of man. It is only keeping these values constantly in mind that one can build a broader viewpoint which will help in winning the peace.

When the teacher has broad objectives in mind, such as the need for developing human understanding, current events take on a new significance. For example, in one school where 98 percent of the children are Negroes, the principal and teacher realized that these children needed to develop selfrespect as a basis for understanding the meaning of democracy. Attention was naturally focused on Africa because of the news that was coming every day from that theater of war. Africa had special significance for these children. A most interesting study of the origin of slavery brought the realization that some Negro tribes in Africa had enslaved others of their own color. The whole question of slavery developed as an illustration of the effect of the principle, "might makes right." Through the teacher's guidance, application was made to the present enslavement of the populations of European countries dominated by Hitler. The word "freedom" gained new meaning for these children whose ancestors had been slaves. As the teacher stressed the fine contributions of the Negro race in this country, such current events as the Negro boy swimming through the shark-infested waters to rescue the white men on the raft, and the wonderful life story of Carver gave significance to the curriculum emphasis. This interest in the Negro in Africa reached its climax in the President's recent visit to Liberia.

In combating extreme nationalism, as expressed in the hatred of the Japanese and Germans, the move of the War Department to enroll loyal Japanese in the Army may be emphasized. The fact that a representative of the Naturalization Service traveled to a point outside the country to a camp to grant naturalization certificates to 200 soldiers, a number of whom were born in Germany, has significance.

The reasons for rationing might be developed as rich curriculum material. A sixth grade made a very interesting study of a balanced diet in keeping physically fit and applied the knowledge of basic nutritional needs to the feeding of our soldiers at home and abroad. They studied the products of countries and the forms of distribution of food in time of peace and in time of war. This unit gave opportunity for emphasizing the storing of food for feeding the starving populations after the war irrespective of race, as an illustration of the interdependence of nations and the brotherhood of man. The gas rationing was related, not only to war needs,

but to the location of the rich supplies of oil in various parts of the world, and the need for economic cooperation among nations when peace comes.

The fact that children learn democracy as they practice it was illustrated in the second grade when, several weeks before Christmas, one of the children brought to school a tragic picture of starving Greek children. The teacher might have hesitated to bring this tragedy to the children's attention, but this was something concrete that they could understand and the picture stimulated a good deal of discussion. The teacher told the children about Greek relief and some of them suggested that they might give up the candy canes which they had always received at their Christmas party, and send the money thus saved to Greek relief. These young children had their own method of voting. The "For" and "Against" sides of any question are placed on the blackboard and at any time during the day, when the spirit moves, the child puts a mark indicating his choice. As a result of voting, all the children but one decided "for." Martin, a fat little boy with an independent nature, held out for his candy cane! Perhaps the most significant thing about the whole experience was that both the children and teacher accepted his decision as his right to make a choice, and respected the minority group of one!

In a situation where a group of boys are discussing how to deal with the action on the playground of one boy who is a bully, a direct application may be made by showing that this boy's actions are akin to the dictatorships.

Helping children to understand the concept of freedom was illustrated in a third grade. During discussion the children had said, "We can go to any church we want to." This gave the teacher the opportunity to tell the children of the provision by the government of the beautiful little churches stationed in each camp. The three altars for the three great faiths emphasized that we have freedom of religion in this country, and the fact that one church served all three groups symbolized the brotherhood of man.

[*Julia Wade Abbot is Director of the Division of Early Childhood Education in the Philadelphia Public Schools. Reported from* Progressive Education, *XX (March, 1943), 111-13.*]

THE title, superintendent of *education,* rather than superintendent of *schools,* is more indicative of the progressive school administrator's philosophy and task today, according to a recent article in *School Executive.*

FITTING PREFLIGHT COURSES INTO THE CURRICULUM

STANFORD HANNAH

In the California Journal of Secondary Education

THIS war will be won in the air by boys who now are in the high schools of America! Secondary school administrators must realize the very probable accuracy of that statement. They must recognize also the importance and the immediacy of the challenge it puts before the high schools of our Nation. We face an emergency situation which demands large numbers of youths trained as soon as possible to do a very important task. We must take these boys as they are and give them training that will help them to fly, to fight, or to service planes. We also must provide preflight training for boys who will not enter military service for two, three, or four years.

Certain high schools now are offering a course or courses in preflight aeronautics. Some limit the enrolment to senior boys, and others are less restrictive. Personally we believe the course will be most valuable and effective when given to homogeneous groups. Boys who have considerable ability in mathematics can master a more technical course than those with less ability. In larger schools it is possible to have two or more sections, and this situation helps to make grouping possible.

We suggest careful planning of the course to the end that the students who later enter training in the military forces or in the Civilian Pilot Training Program for those forces will get the maximum results. The ground courses being given in the latter necessarily will be more "practical" and perhaps more advanced than the high-school preflight courses. At present they have the handicap of being "crowded for time" and so should benefit greatly in the future when they begin to receive students who have had the advantages of a preflight course in high school. Instructors should familiarize themselves thoroughly with these and other military primary ground courses in aeronautics.

Thorough training in mathematics and physics is urged as preliminary work to aeronautics. From the ninth grade up, and indeed even earlier, courses in mathematics and science should increase the attention given to aviation topics and problems. Work in mechanical drawing and mechanics will be of value. Provision must be made for the wide variation in the abilities of students. The aviation industry and the aviation branches of the armed forces have need for men of greatly varied training and capacity for training and recognition must be given to the fact that there are many engaged in other

phases of aviation besides flying.

The introduction of preflight aeronautics should be considered as a permanent development in the activities of the secondary schools. If we agree that the "age of the air" is here, then probably most of our students, boys and girls, eventually will pilot their own planes.

The following four-year curriculum is to be considered as a suggestion only.

Ninth Grade	Eleventh Grade
English	English
Physical Education	Physical Education
Algebra I	Algebra II
General Science	U. S. History and Government
Elementary Shop	Aeronautics I

Tenth Grade	Twelfth Grade
English	English
Physical Education	Physical Education
Plane Geometry	Solid Geometry (½) and Trigonometry (½)
Mechanical Drawing	
Geography	Physics
	Aeronautics II

The above program obviously is arranged for the superior students. In schools with a seven-period day there is sufficient time left available for the student to meet certain university entrance requirements or for him to comply with his particular interests. For those who are unable to profit by the usual study of advanced mathematics we suggest courses in "Preflight Mathematics" and "Preflight Science" be substituted in the 11th and 12th grades. Provision must be made, too, for the "mechanically minded" boys who have taken the maximum number of shop courses. These, too, may become pilots, or gunners who must fly in an emergency.

Guidance as a function of the high school is important in preflight training. Too many boys have planned and worked for years with the idea of becoming pilots, only to find that they are not equipped physically for this exacting role. Careful physical examinations with definite follow-up activities should discover most of the causes for rejection, and in many cases early discovery makes possible the correction of conditions. If a physical condition exists which precludes the individual's ever becoming a pilot, the adjustment to some other occupation, perhaps in the field of aviation, can be made more easily.

In other aspects of the guidance program, we must be constantly aware of the national emergency need for fliers. The Army and Navy estimates of future needs are so great as to indicate that we must "sell" boys the idea of doing their patriotic duty. Fortunately American boys are easily "sold" on this idea and as easily "sold" on the idea of flying.

In fairness to our students and in recognition of our responsibilities to them, our guidance should look ahead to eventual peacetime pursuits. We believe that first of all the national war need must be considered, but we believe also we must

use all the thought and ingenuity possible to coordinate training to meet the national need and the individual's future welfare.

The selection of the teaching personnel is especially difficult at this time. Because of the nature of aviation, teachers must have a good knowledge of mathematics and physics. If they have this background, are interested in aviation, and have the "teaching spirit," they can acquire the necessary specific knowledge of aeronautics by their own home-study programs and by teacher-training courses being offered in the summer sessions of many universities.

Accuracy of teaching and of materials is to be emphasized. School administrators are being flooded with a vast amount of materials purporting to teach aeronautics. Most of these will bear close scrutiny, and we can only suggest that schools initiating the program correspond with other schools that have made some progress even if by the trial-and-error method.

The high schools of America indeed have had a challenging and a difficult job thrust upon them. There will be factors in the program we do not like. The time element is too important. The students are too young. Our teachers are being drafted, volunteering, or entering more lucrative fields. But the job must be done. American schools will find a way to do it.

[*Stanford Hannah is District Superintendent of the Taft Union High School and Junior College, California. Reported from the* California Journal of Secondary Education, *XVIII (January, 1943), 27-29.*]

GEOGRAPHICAL DISTRIBUTION OF LEADERS IN EDUCATION BY BIRTH AND BY PRESENT RESIDENCE

Section	*Born in* No.	*Born in* Percent	*Now in* No.	*Now in* Percent	Percent now in who were born in same section
Eastern	4738	27.7	5501	32.1	59
Southern	3148	18.3	3668	21.4	60
Great Lakes	4130	24.1	3337	19.5	56
Great Plains	2749	16.1	2117	12.4	50
Western	752	4.4	2131	12.5	20
Other	1606	9.4	369	2.2	—
Totals	17,123	100.0	17,123	100.1	—

—J. R. Shannon and Marian A. Kittle in *School and Society.*

THE EDUCATIONAL STATUS OF AMERICAN ADULTS

EDMUND DES. BRUNNER

In the Teachers College Record

IN its 1940 census the United States made an effort for the first time to measure the educational status of the population. This census recorded for each person 25 years old and over the number of years of schooling completed, providing data valuable intrinsically, and in relation to other types of census data. The median school years completed is also given. This information is published according to sex, by four race groups—native-born white, foreign-born white, Negro, and other races—for the urban, rural nonfarm and rural farm areas, and for cities of 100,000 and more. The basic data are also given by counties according to the above divisions, and for urban places over 2500 population. Analysis shows that nearly three million persons over 24 have never completed a grade of school and that 7.3 million more of the 74.8 million persons in this age group have had only from one to four years of schooling. At least 13.5 percent of the population thus fall in the functional illiterate group. Explanation of this disturbing fact lies in part in the low status, educationally speaking, of the Negro. This race supplies 8.7 percent of the population group under consideration, but 26 percent of the functional illiterates.

One of the interesting revelations in these data is the small variation in the median number of years of schooling completed among the northern and Pacific coast states. In the former group the variations between the high and low states is .7 of a year and within some of the census regions the variation is even smaller, as Table I shows.

This slight variation in median

TABLE I

Variation in Median School Years Completed by Adults 25 Years of Age and Over by Census Divisions (1940)

Division	Number of States	Median Years Completed Highest State	Lowest State
New England	6	9.0	8.3
Middle Atlantic	3	8.4	8.2
East North Central	5	8.6	8.3
West North Central	7	8.8	8.3
South Atlantic	8	8.5	6.7
East South Central	4	7.7	7.1
West South Central	4	8.5	6.6*
Mountain	8	10.2†	7.9
Pacific	3	9.9	9.1

*Louisiana—Lowest median in the U. S. †Utah—highest median in the U. S.

years of schooling may appear to some as the standardization of the public school program. The rise of teachers colleges, the activities of national educational associations, and of the conference of chief state school officers probably has had some influence in this direction. More important, however, is the high regard which the people of the entire Nation have for education. It is the people who pay the bills and high school attendance, if not graduation, for all has increasingly become a goal toward which the people of the United States are steadily working.

This is true in the South as well despite the consistently lower averages of the states in this region. The trend in this direction is shown in the cities. In the 15 states in the Middle Atlantic and two North Central census divisions, the median years of schooling varies from 8.4 to 10 in the cities. In the 15 states in the southern division, excluding Louisiana, the range is from 8.1 to 9.9, and 12 of these states average 8.4 or better. It may surprise some that the median years of school of the urban population in Mississippi and Arkansas, 8.7 and 8.9 years respectively, exceeds the 8.4 average of each of the Middle Atlantic states, despite the high proportion of Negroes in the southern states.

The medians of the Negro, and to a real but lesser extent those of the foreign-born white, have a retarding effect on the percentages. Nationally the situation can best be stated in tabular form, as presented in Table II. When analysed by divisions, figures indicate that the southern Negro, especially the rural Negro, is not granted anything which even approaches equality of educational opportunity. In all but five of the 32 non-southern states the Negro urban average exceeds that of the foreign-born white and in two of these five the medians are equal. This holds in only three of the 16 southern states. The differential between whites and nonwhites is also high for the urban population of the Mountain and Pacific areas, averaging about three years, but the Negro median in these states is slightly above the median in the South for the total population.

TABLE II

Median Years of School Completed by Nativity Group for Urban, Rural Nonfarm and Rural Farm Population 25 Years of Age and Over (1940)

Classification	Urban	Non-Farm Rural	Farm Rural
All classes	8.7	8.4	7.7
Native-born white	9.6	8.6	8.0
Foreign-born white	7.4	7.3	7.2
Negro	6.8	5.0	4.1

Table II also indicates that on the average the rural nonfarm population lags about a third of a year behind the urban and that the rural farm lags just a year. When native whites alone are considered the differentials are one year and 1.6 years respectively. This is a measure of

the handicaps under which rural schools have labored in the past. Again, since the data are concerned only with those adults 25 years of age and over, they fail to indicate whether any recent improvements have been made in rural education. The rural farm-urban comparison develops two patterns. In the older areas the difference is one year or less in 10 of the 14 states. In the farther west all but one of the 18 states show a difference of more than a year and the average is approximately one and three-fourths years. The farther west and the more recent the time of settlement, the greater the difference between urban and rural in the number of grades completed by white adults.

Nevertheless, *the United States is better educated.* One measure of recent progress in education is shown in the median school years completed by age groups, data which will not be fully available until the Fourth Series of Population Bulletins is issued. One tabulation on this point for the white population based on a 5 percent sample has been released and holds much of encouragement for educators. Whereas the Age Group "65 years and over" shows 7.6 median school years completed that of "25 to 34 years" shows 10.5 years completed and the improvement between the two groups has been steady.

[*Edmund de S. Brunner is Professor of Education at Teachers College, Columbia University. Reported from the* Teachers College Record, *XLIV (February, 1943), 355-60.*]

AS a check against the harm which may be done through careless and common faults in air-raid planning, the following pitfalls have been listed in *School Executive* by Edwin R. Van Kleeck, assistant commissioner for instructional supervision in charge of evacuation programs in New York State: plans should be flexible enough to allow for the unpredictable and inevitable variations in time between the signals; places of refuge should be checked to ascertain that ventilation and running-water facilities are adequate; plans must be detailed enough to care for the different needs of each school; alternate plans should be rehearsed often; there should be a proper escort for children in the event that they have to be sent off school property; parents must thoroughly understand and be satisfied by the air-raid plans.

DEVELOPING TEACHER LEADERS

ALICE MIEL

In Leadership at Work

THERE is one kind of superintendent, fortunately on the increase, who states his position this way: "I am responsible to the board of education. I am expected from time to time to recommend certain policies for the board's consideration. When I can announce that a policy which is being submitted has been developed by the staff working cooperatively, both the board and I will proceed to its adoption with greater confidence. Since I, as a superintendent, stand or fall on the success of our whole program, I prefer to have the benefit of the wisdom and experience of all members of our staff." This superintendent provides not only for group policy-making but also for group planning of procedures to be used in carrying out the policies. He realizes that every principal, every supervisor, and every teacher must necessarily have a part in the execution of policies. He, therefore, sees to it that each individual becomes intelligent about the policies he is to help carry out through having participated in the formulation of them. What is more, he encourages every administrative and supervisory official to exert the same type of democratic leadership in all dealings with one another and with teachers.

To Santa Barbara came a new superintendent who realized the need of study and possible reorganization of their own school system. He shifted the school emphasis from the authoritarian to the democratic approach. If a program were to be effective, it must be as nearly as possible in terms of teacher understanding. It must be a teacher-made program. "What are the best methods and technics to use in a curriculum revision" was asked. "What should be the pattern of action?" So with the aid of administrators, directors, and teachers the work of curriculum revision was begun. In the preliminary stages a year was given over to intensive study on the part of teachers and administrators, with the total school of education acting as consulting agency. Social, philosophical, and psychological foundations were studied intensively as well as the best curriculum approaches utilized in leading educational centers. A request came from teachers for a study of the skills, and skills committees were formed, representing a cross section of the entire school. A homemaking committee has been functioning for three years. As a result sequential areas of living were developed which would help the junior high-school child understand and carry on home activities more effectively. Attention now is being given to the senior high school. The evaluating committee is a continuing committee. It, too, is composed

of teachers from the primary grades through the high school. This committee has listed all the activities that are carried on in the classroom and is attempting to build evaluation tools and technics to be used by pupils on different age levels in analyzing their learning experiences. It is commendable that what happened at Santa Barbara in the way of teacher insight and creativity and leadership has seemed more important than getting a curriculum down on paper.

Participation in curriculum development is not the only way in which teacher leaders may be produced. At Hartford, Connecticut, many teachers were given an opportunity to help plan a new elementary-school building. When the Hartford Board of Education agreed that the proposed building should be the result of the best experience and practice available and that those most concerned and nearest to the problem should aid in the planning, the way was open for teacher participation in the project. An early step was the setting up of units to be planned by those most experienced and most concerned. Such units as administrative and health departments, primary division, auditorium, special rooms (library, art, homemaking, shop, science), and service (boiler room, toilets, janitor's room) were allocated to various members of the planning group. It was the educators' task, with the aid of those whom they wished to consult, to plan the functional aspect since they knew what they wanted the building to do. Their plans were turned over to the architect who was to design the building and comment on the plans as they fitted into the entire scheme. There was a splendid spirit of teamwork throughout. To quote the local architect, "I wish there were more jobs like the Burns School where cooperation means something." Burns School was built at moderate cost and it has been rightly called "a school teacher's idea of what a school ought to be." The product of cooperative planning was highly satisfactory from the standpoint of beauty, utility, and cost. One cannot help but feel that there must have been an additional result, something that happened to the teachers who had a part in the enterprise.

In the Ethical Culture Schools in New York City there is provision for regular participation of teachers in many administrative activities, including such matters as budget-making and selection of personnel. Functional organization provides for active representation of all who are vitally concerned with the educational and administrative policies of the schools. There is the administrative council, of which the educational director is a chairman, and a board of governors comprising in its membership representatives of the Society for Ethical Culture (the parent body of the schools), two par-

ent representatives, an alumni representative, ex officio officers, and two faculty representatives (one elected by the elementary- and one by the secondary-school teachers). When the budget-making process has run its course all the members of the various departments have shared in deliberations and recommendations. The budget reaches the board of governors by way of the schools' finance committee and it is voted on by a body on which the faculty, as stated previously, has representation. It is plain to be seen that in the Ethical Culture Schools, regular channels are provided for teachers to make recommendations affecting the school. Such a scheme of organization has the virtue of encouraging systematic consideration of the problems of an institution and usually insures orderly and steady improvement of education.

The Ethical Culture Schools in which "all teachers concerned are involved in the selection of new members of the staff" is not the only one. Other schools and colleges in which teachers share either in the selection of personnel or in making decisions regarding dismissal of personnel are Antioch College, Milwaukee State Teachers College, the Norris Schools in Tennessee, Ohio State University Schools, and the public schools of Pueblo, San Diego, and Springfield, Missouri.

To some it may seem that the selection of personnel is one area in which teachers should not be allowed to have a voice. Yet when one considers what a stake teachers have in the kind of persons with whom they are asked to work, experimentation with this function seems like a logical development. The usual procedure seems to be for a committee of teachers to handle the problem, often in cooperation with the superintendent of schools and other administrative and supervisory officials. In Springfield, for example, a teacher committee interviews candidates and even sends representatives to visit candidates on the job if distances are not too great. Sometimes the participation of teachers in selection of personnel has been the result of administrative leadership. In other cases a classroom teacher organization or a teacher union has gained this privilege for the teaching group. It cannot be doubted that teachers who have the welfare of the school at heart are always deeply concerned that new persons added to the staff will be worthy of the responsibilities entrusted to them. Both the school and the teachers should benefit from allowing teachers to exercise leadership in this direction.

Another approach to teacher participation in administration has been used at Olympia, Washington, where the "Schoolboard Relations Committee" has been active for several years. Organized about five years ago at the suggestion of the

city superintendent of schools to assist in drawing up a new salary schedule, the committee worked so effectively with the teachers, the superintendent, and the schoolboard that it was made a permanent committee. Appointed annually by the president of the Olympia Education Association, it is composed of six teachers—one from each school building in the city. Usually the committee meets with the board in October, primarily for the purpose of renewing contacts and to acquaint the board with new members of the committee. A second meeting is attended in the spring just prior to the adoption of the budget, at which time any teacher requests affecting the budget, such as inclusion of additional steps on the salary schedule, are submitted. Frequently a third meeting is held with the board to report on some special study that has been completed—a problem or project determined by the group just following the opening of school in the fall, and usually one suggested by the teachers. Teachers who work in school systems where the superintendent jealously guards his special privilege of presenting all matters to the board of education personally and, if possible, in private, would undoubtedly appreciate the opportunity which Olympia teachers have of working directly with the board of education. To trust teachers to this extent usually pays big dividends in loyalty and interest.

In Lincoln, Nebraska, teachers have been drawn in on the problem of pupil use of city library facilities. The teachers made three studies centered about the extent to which pupils actually use library facilities. Another study pooled the experiences of teachers and principals regarding such use, and still another utilized experimental class visits to the library to study and appraise various technics of preparing for, conducting, and following up such visits. The administrative and supervisory group in Lincoln, had it chosen, could have handed out some regulations regarding use of the city library and asked the teachers to comply with them. But one can easily predict what would have been the result in terms of teacher, and consequently of pupil, morale. The best cooperation is secured from individuals who see the purposes and problems involved and who have helped work out the solutions which are to be tried.

Ofttimes teachers take up school problems and solve them, verbally at least, in informal groups. Usually the proposed solutions are never carried out, for in many schools teachers are discouraged from making suggestions rather than encouraged to do so. In the high school at St. Petersburg, Florida, however, the unusual has happened. "We were in the teachers' room one day just talking," these teachers will tell you, "when someone mentioned the need for improvement in our regis-

tration of incoming sophomores. We agreed that sophomores are lost when coming to us from smaller schools, that they need guidance in choice of subjects, help in finding classrooms, and a closer follow-up adjustment." Practical suggestions for improvement followed. Result: a new system of sophomore registration. Teachers drew up questionnaires for the ninth-graders, one to be filled out by the pupils at their leisure, assisted by their parents and teachers, and another one, confidential, filled out by their homeroom teachers. Twenty-five teachers had volunteered to serve in the new sophomore program and when the questionnaires were returned to the senior high school they were sorted in preparation for orderly registration and the teachers were assigned to the five groups represented. Weekly meetings of the teachers with each sophomore group now serve as a guidance clinic in which the problems of the individual sophomore may be discussed. The sophomore is no longer a bewildered member of a student body of 1700 but one of a small, carefully supervised group. The interesting feature of the St. Petersburg experience is that a group of teachers initiated an excellent plan and carried it through to successful completion. It may be assumed that the administrative leadership in the school was more than usually friendly to suggestion for change. Too often teacher enthusiasm is dampened by an unsympathetic and inflexible principal who is unwilling to give a fair trial to new ideas coming from teachers.

The teachers college, which frequently reaches teachers of experience, has an excellent opportunity to give its more mature students a taste of the democratic cooperation that is necessary if teachers are to participate in administration and be democratic leaders of students. The teachers college at Troy, Alabama, has attempted to provide a functional type of education for experienced teachers. "Education 303" was holding its opening session. "Are there any questions about this course which concern you?" asked the instructor. "May two students go togather to buy the text?" "Are we expected to write a term paper?" These were among the questions he heard. "Let's get acquainted," the instructor parried, "before we try to answer these questions. I understand that testing—evaluation is the broader term—begins the first day of school (some of the students were visibly worried) but in a different way perhaps than you have thought of before. It begins with the purposes of the students, what they would like or feel they need to do, facing some problem that's really troublesome, or working out some plans that busy days in school have long delayed." It was thus that the instructor uncovered real problems—common problems in which they might help each other more

than the instructor could. Sometimes the instructor seemed quite unnecessary as he visited one busy group after another and the group members were the experts telling how they handled "such a case last year." Energy and enthusiasm were liberated as democratic planning removed the usual course restrictions. The same amount of energy and enthusiasm may be liberated when teachers on the job have opportunities to do democratic planning and discovered that their contributions are valued by others.

But there is a danger that teachers may become more frustrated than ever if the technics for developing teacher leaders are not given careful study. Perhaps the worst situation to be in is that of a teacher whose administrative head is merely pretending to be democratic or who has so little understanding of the requirements of a democratic leader that he unwittingly violates most of the rules most of the time. If a superintendent or principal or supervisor is not willing to abide by any decision that may be called a genuine group decision, that individual has no right to ask the group to go through the proces of making a decision in the firs place. If the official merely want the advice of the group, that poin should be made quite clear at th outset. If the official does not hon estly welcome suggestions from th staff and intend to see that they re ceive fair consideration, he should make that clear to his staff also. Much embarrassment and disap pointment on the part of teacher can thereby be avoided.

The ideal situation is one in which gradually over a period of time a suitable functional organization ha been developed. Suitable organi zational machinery will guarante regular and effective participatio of teachers. All will know what t expect in the way of privileges and responsibilities. This is not to say that machinery alone will do the trick. The point is that so impor tant a matter as development o teacher leaders must not be left t chance. All must feel that they are partners in an enterprise. Operation must proceed on the basis of policies determined by the group if leader ship is to be democratic enough t breed leadership.

[*Alice Miel is a member of the faculty of Teachers College, Columbia University. Reported from* Leadership at Work, *Chapter II, pp. 27-47. Fifteenth Yearbook of the Department of Supervisors and Directors of Instruction of the National Education Association. Washington: The Department, 1943. 248 pp.*]

FEDERAL AID BILL FOR TEACHERS' SALARIES

WILLARD E. GIVENS

In the Journal of the National Education Association

THERE are two outstanding needs for federal aid at this time: (1) There is need for funds to meet the crisis in teachers' salaries. Thousands of teachers have left the profession and gone into other kinds of work in order to obtain a living wage. Thousands of classrooms are without teachers and thousands of other classrooms are filled temporarily by teachers not regularly licensed and fully qualified for the important work they have to do. Teachers have received but little adjustment in salaries to meet the increased cost of living. On the average, teachers' salaries have been increased only 7 percent during the war emergency while living costs have increased more than 20 percent. Without increase in salaries this condition will become progressively worse. (2) There has been a long standing need for federal aid to reduce inequalities of educational opportunities among and within the states. That need still exists and to a greater degree than ever. There is no doubt that it will exist after the war.

In the light of these needs S.637, a new bill introduced in the 78th Congress, contains the following provisions:

1. Appropriations for $300,000,000 annually are authorized: (a) An annual emergency appropriation of $200,000,000. This fund is for the payment of the salaries of teachers to keep schools open, to employ additional teachers to relieve overcrowded classes, to raise substandard salaries, and to adjust salaries to meet the increased cost of living. Funds are to be apportioned to the states on the basis of average daily attendance. This fund is to be used exclusively for salaries and will be available only to those communities which out of state and local funds are paying salaries at least equal to those paid on February 1, 1943. (b) A permanent appropriation of $100,000,000, annually for the purpose of more nearly equalizing public elementary and public secondary educational opportunities among and within the states—these funds to be apportioned to the states on the basis of an index of financial need. This index is determined by the number of persons five to seventeen years of age and the total income payments of the respective states. The poorer the state, the larger the share of aid it will receive.

2. Control of the schools is reserved strictly to the states and local school systems and forbidden to any federal officials or agencies.

3. The distribution of funds within a state is to be determined solely by state authority.

4. Federal funds cannot be used to reduce or replace state funds.

5. In states that maintain separate

schools for minority races, there will be a division of federal funds among the separate races in proportion to population without a reduction in the proportion of funds from state and local sources spent for schools for the minority races in 1942.

Thomas Jefferson wrote to his friend, James Madison, "I hope the education of the *common people* will be attended to: convinced that on their good sense we may rely with the most security for the preservation of a due degree of liberty."

The Thomas-Hill Bill, S.637, makes more adequate provisions for "the education of the common people." According to the 1940 census the number of citizens whose education has not extended beyond the fourth grade in school amounts to more than 20 percent in 11 of the 48 states. Out of this situation come 750,000 men who are disqualified for military service because they lack sufficient education. This is as unnecessary as it is tragic.

The public elementary and secondary teachers of this nation, in addition to their usual work, are making a substantial contribution to the preparation of the workers for the war industries. More than 3,000,000 men and women have been given specific skills. From kindergartens to universities teachers are selling war stamps and bonds, collecting scrap metal and rubber, and cooperating with the civilian defense. Teachers have gladly assumed extra burdens in the war effort. They have freely given more than 38,000,000 hours to sugar and gas rationing and to clerical duties in connection with the Selective Service. Teachers have taken their places in the military service along with the men and women from all other walks of life.

The National Education Association is determined that schools shall be fully effective in this critical period. This objective cannot be attained unless teachers' salaries are increased. It is promoting S.637 for this purpose. We hope that this bill is such that you and your fellow-workers will support it vigorously. Write your Senators for copies of S.637 and tell them of the discouraging conditions which your schools face because of the war.

[*Willard E. Givens is Executive Secretary of the National Education Association. Reported from the* Journal of the National Education Association, *XXXII (March, 1943), 69.*]

THE federal government is launching a large-scale training program to supply stenographers to federal agencies as many high-school graduates need retaining.

PERSONALITIES: **Leonard Miller,** former director of guidance at Rockland County, N. Y., has been appointed supervisor of occupational information and guidance, Pennsylvania State Department of Instruction. . . . **Paul Witty,** Northwestern University, is a major in the Adjutant General's office in Washington. . . . **W. B. Featherstone** of the division of curriculum, Teachers College, Columbia University, is a captain in the Adjutant General's Department and is on duty at Fort Jay, N. Y. . . . **Ronald V. Billington,** executive assistant in vocational education, U. S. Office of Education, died recently. He began his federal service in Washington in 1925 as a staff member of the Vocational Rehabilitation Service of the Federal Board for Vocational Education. . . . **Vivian Edmiston** has been named field secretary for the Committee on Teacher Education for the State of New York. She was formerly with the Bureau of Educational Research in Science, Teachers College, Columbia University. . . . **Lars W. Boe,** president of St. Olaf College since 1918, died at his home in Northfield, Minn. recently. . . . **Vance Tartar,** University of Vermont, has been appointed professor of physical sciences, Central Washington College of Education, Ellensburg, succeeding **E. L. Lind,** now on leave of absence for service in the Army. . . . **Galen Saylor,** University of Nebraska, has accepted an appointment as special research analyst with the pre-induction section of the War Department. . . . **Robert Johns Trevorrow,** president of Centenary Junior College, New Jersey, and past president of the American Association of Junior Colleges, died recently. . . . **Hollis Caswell** and **Gordon Mackenzie** are in Washington doing work for the War Department on programs of high-school pre-induction training. . . . **Frank C. Bean,** former superintendent of schools, Bagwell, Tex., has been appointed head of the department of education, Paris, Texas, Junior College. . . . **Dorothy Summey,** supervisor of grades in Lockport, N. Y., schools for the past eight years, is senior supervisor of extended school services in the elementary education division, New York State Education Department. . . . **C. Edward Hausknecht,** head of the music department, State Teachers College, West Chester, Pa., for the past 22 years, died recently. . . . **Burritt C. Harrington,** former president of Cazenovia Junior College, N. Y. has been appointed supervisor of adult education, New York State Education Department. . . . **Rev. Henry E. Horn,** pastor of the Immanuel Lutheran Church, Philadelphia, Pa., has been elected president, Marion, Va., College to succeed the late **Hugh J. Rhyme.** . . . President **C. C. Ellis** of Juniata College, Huntington, Pa., has announced his intention to resign Sept. 1, 1943. . . . **C. A. Buckner** has retired as professor of education

at the University of Pittsburgh. . . . **Margaret G. McKim** is instructor in psychological and biological foundations of education, Teachers College, Columbia University. . . . **D. Lloyd Nelson,** former assistant director of operations for Los Angeles schools, has been appointed to the newly created post of assistant superintendent of schools for Los Angeles county. . . . **Wendell Andrews,** former principal of Van Hornesville, N. Y., Central School, has been appointed associate supervisor in the bureau of instructional supervision in the elementary education division, New York State Education Department. . . . **Heth G. Coons,** superintendent of Amsterdam, N. Y., schools since 1938, died recently. . . . **W. O. Mendenhall,** president, Whittier, Calif., College, has announced his intention to retire at the close of the present academic year. . . . **Earl Raymond Hedrick,** vice-president emeritus, University of California, Los Angeles, recently died. . . . **John J. Lee,** associate professor of special education, Wayne University, Detroit, Mich., has been elected president of the International Council for Exceptional Children to succeed **Samuel Kirk,** now in the Army. . . . **Frank Clayton Ball,** president of Ball Brothers Company, Muncie, Ind., died recently. He was one of the five brothers who in 1913 purchased the Muncie Normal School, later to become the Ball State Teachers College. . . . **H. Landis Tanger,** president, State Teachers College, Millersville, Pa., has announced his intention to retire June 1. . . . **Ralph D. Wellons** is the new president of Pembroke, N. C., State College. . . . **William Anthony Granville,** former president, Gettysburg, Pa., College, died recently. . . . **William Lawrence Eccles,** instructor in chemistry, Phillips Academy, Andover, Mass., has been appointed headmaster, St. George's School, Newport, R. I., to succeed **J. Vaughan Merrick,** 3rd, who has resigned. . . . **Frederick Pistor** has been named professor of education and psychology at Georgia State Woman's College, Valdosta. . . . **Isle Forest,** former associate professor of education, Bryn Mawr, Pa., College, has been named director of the Froebel League School, New York City, succeeding the late **Hugh Stuart.** . . . **Lloyd W. King,** for eight years state superintendent of schools and state director of vocational education for Missouri, has been selected executive secretary of the American Textbook Publishers Institute. . . . **Raymond Asa Kent,** president University of Louisville since 1929, died of a heart attack. . . . **Shelton Phelps,** president, Winthrop College, Rock Hill, S. C., has announced his intention to resign in August. . . . **F. G. Macomber,** professor of education, University of Oregon, has been transferred to the WAAC training camp, Daytona Beach, Fla., where he is director of training and third

in command. . . . New college presidents are: **Harmon Lowman,** acting president of Sam Houston State Teachers College, Huntsville, Texas; **Lynn T. White Jr.,** Mills College, California, formerly professor of history at Stanford University; **Harold G. Cook,** McMurry College, Abilene, Texas, formerly district superintendent, Methodist Church, at San Angelo, Texas; **R. O'Hara Lanier,** acting president Hampton Institute, Hampton, Va.; **William J. Mahoney,** St. John's University, Brooklyn, N. Y., formerly dean of College of Business Administration, Niagara University, N. Y.; **Edward J. Whelan,** Loyola University, Los Angeles, Calif.; and **William L. Imes,** Knoxville College, Knoxville, Tenn., formerly pastor St. James Church, New York City. . . . **Dennis H. Cooke,** whose post of professor of school administration, George Peabody College for Teachers, Nashville, Tenn., was erroneously reported in an earlier issue, has held this position for several years. . . . **Kermit Eby's** contract as Executive Secretary of the Chicago Teachers Union has been cancelled by the Union. . . . **Charles S. Johnson,** director of the Fisk Institute of Social Sciences, has assumed the duties of director of race relations for the American Missionary Association Division of the Board of Home Missions of the Congregational Christian Churches. . . . The War Department has asked state education director **Alonzo Grace** of Connecticut to direct civilian pre-induction training for the Army. . . . **J. H. Foard,** former teacher of vocational agriculture in several Missouri schools, has been appointed director of rural war production and acting state supervisor of vocational agriculture in the state department of education. . . . **F. E. Wolverton,** for the past five years superintendent of schools at Delta, Cape Girardeau Co., Mo., has been appointed supervisor of public schools in southeast Missouri.

A LONG look at life—and education—in the United States in the event of a long war reveals that a cut in civilian consumer requirements will be necessary which will put our life on a bedrock basis, it was pointed out in the news letter of the Educational Press Association. In a series of tables prepared by the WPB, the cost of education would be cut to 89 percent of the 1941 level, meaning that since $2,695,000,000 was spent for education in 1941, only $2,440,000,000 may be spent in 1945 or 1946 if the war lasts that long. Education will not fare so badly in comparison with other consumer services however, since medical care, for example, would be reduced to 89.2 percent of the 1941 level and recreation to 60.3 percent. A wholly different picture of education will result from civilian life going on this "bedrock" basis. Books will be cut to 40 percent of the 1939 level,

measured in terms of dollar values. Atlases will be eliminated almost altogether, only 4 percent of the 1939 value to be published. In the bedrock economy schools will be heated at 60 degrees; paper towels may be missing altogether. Minimum civilian consumer requirements for education, valued at 1941 prices, costs, and rates, are shown in the following chart, drawn up by the WPB exactly as stated below:

	Consumption in 1941	Minimum Annual Value	Requirement As a % of Consumption in 1941
	(millions of 1941 dollars)		
Higher education	510	306	60
paid for by students	199		
otherwise financed	311		
Elementary and secondary education	2,004	2,004	100
paid for by students	140		
otherwise financed	1,864		
Commercial, correspondence, and trade schools	97	48.5	50
Other instruction, except athletics	84	42	50
Total	2,695	2,400.5	89.1

The only explanation the WPB offers of the table is that the above estimates are based on the belief that the level of educational services therein implied is necessary if a sufficient number of technicians and officers for the armed forces and skilled workers for the war factories are to be trained. Emphasis will have to be shifted to scientific and vocational training.

THE annual summer convention of the National Education Association, to have been held June 25-29 at Indianapolis, Ind., has been cancelled, due to transportation difficulties, it was announced at NEA headquarters in Washington. A meeting of the Representative Assembly will be held at Indianapolis the latter part of June to transact the regular business and to organize the Association for the greatest possible service in the war effort and the peace that follows.

THE House Appropriations committee has refused funds for certain educational and human-welfare projects. One of these was a request from the Office of Defense Health and Welfare Services for $2,973,000 to finance a program for taking care of children of employed mothers. The possibility exists, however, that the Senate may take favorable action on the request from the U.S. Office of Education for $3,182,000 to strengthen the High School Victory Corps, which was turned down by the House committee.

FREE loan packets containing a wide variety of material on how educational institutions may help the war effort may be obtained for two weeks from the Information Exchange, U. S. Office of Education, Federal Security Agency, Washington, D. C.

NINETEEN universities are now giving free correspondence courses to teachers of "subjects unrelated to the war," under the sponsorship of the U. S. Office of Education's Engineering, Science, and Management War Training program. These courses will retrain the teachers for instructorships in physics and mathematics. In a release from the University of Chicago, it was stated that the university has enrolled 58 such teachers, of whom 19 are women and one-third are from the high schools of Puerto Rico.

EDUCATIONAL services have been certified by the War Manpower Commission as essential to the war effort, thereby constituting a reason for the reclassification by the draftboard from 3-A to 3-B of any registrant engaged in an activity essential to the war effort and on whose earnings one or more persons depend. Various factors will be considered regarding the registrants in educational services such as the kind of institution in which the registrant is engaged, his occupation there, and the classroom studies under his jurisdiction. Attention will also be paid to the training necessary for his kind of work, the registrant's personal qualifications, and the availability of persons who might be able to replace him.

THE consolidation of the Department of Supervisors and Directors of Instruction of the NEA and the Society for Curriculum Study has been somewhat delayed by the cancellation of all education meetings in St. Louis in February. A report has been submitted to the editorial boards of *Educational Method*, the *Curriculum Journal*, and to officers of the component organizations regarding the adjustment of existing journals to the new organization.

STARTING about July 1 the Navy's V-12 program will begin its task of producing officers for the Navy, Marine Corps, and the Coast Guard through the training of students and graduates of both high schools and colleges. Qualifying tests were held on or about April 2, by the Army as well as the Navy inasmuch as the former will also use educational institutions for war training programs.

THE need of pre-induction training for army clerical workers is gradually being realized as the war progresses. An outline of courses which might be offered by the schools to alleviate this need is given on page 10 of the March 15

issue of *Education for Victory*, issued by the U. S. Office of Education. Further communications relative to work in this field should be addressed to the Business Education Service, U. S. Office of Education, Washington, D. C.

ONE of the causes of the increasing rate of juvenile delinquency may be attributed to the fact that more young children are permitted to amuse themselves for longer hours outside the home and school as their mothers march to work in war factories. Miss Elsa Castendyck, Director of the Social Service Division of the Children's Bureau, reported that the juvenile delinquency courts serving cities with a population of more than 100,000 had an increase of 11.5 percent in 1942 over 1941, and that smaller cities had only 6 percent. The number of delinquent girls increased by 31 percent in 1942 over 1941, the number of delinquent boys increasing only 7.5 percent.

AN over-all survey of the major wartime problems of education is presented in a comprehensive *Handbook on Education and the War*, based on proceedings of the National Institute on Education and the War. The book contains the full texts of statements by heads of those federal war agencies which touch education. (Several of these were condensed in the October issue of the EDUCATION DIGEST.) The other part contains reports of sym posiums held on 26 of the mo acute wartime educational issues.

A SURVEY of white and Negro edu cation conducted in 13 Texas cou ties with large Negro populatio showed wide discrepancy in th facilities for Negro education fro county to county, with much lowe standards for Negro education tha white, B. F. Pittenger, dean of edu cation at the University of Texas has reported.

APPROXIMATELY 8,000 teachers have left colleges and universities in the last year to enter the armed services, or to take jobs in the federal government, war industries and other fields. Many of these changes involved increases in income, according to the U. S. Office of Education.

DATES OF THE MONTH:

April 2-5, Association for Childhood Education, St. Louis, Mo.

April 14-17, American Association for Health, Physical Education, and Recreation, Cincinnati, Ohio.

April 17, Regional Progressive Education Association, Conference, Greenwich, Conn.

DATES OF THE COMING MONTH:

April 30-May 3, Fourteenth Institute for Education by Radio, Columbus, Ohio.

May 19-20, American Association for Adult Education, New York City, N. Y.

NEW BOOKS

Elementary

Glenn O. Blough. *The Insect Parade, Water Appears and Disappears, An Aqarium, Animals Round the Year, Plants Round the Year, Teaching Manual.* Biological science textbooks in the Basic Science Education Series. Evanston, Ill.: Row, Peterson & Co. Each 36 pp. Illustrated in color. 32c each.

Selma Coughlan and Mabel O'Donnell. *The Wishing Well.* Parallel primer in the Alice and Jerry Series. Evanston, Ill.: Row, Peterson & Co. 128 pp. 72c.

Companion Book for Engine Whistles. Supplementary workbook to go with *Engine Whistles,* fifth-year level reader in the Alice and Jerry Series. Evanston, Ill.: Row, Peterson & Co. 28 pp. 36c.

Secondary

Physical Fitness Through Physical Education for the Victory Corps. A wartime program for high schools. Washington: U. S. Office of Education. 102 pp. 25c.

Mellie John. *Natural English I.* An English textbook with emphasis placed on the student rather than the subject matter. Evanston, Ill.: Row, Peterson and Co. Illus. 526 pp. $1.40.

Mellie John. *English for You. II.* Evanston, Ill.: Row, Peterson and Co. Illus. 591 pp. $1.52.

Olga Perschbacher and Dorothy Wilde. *America Speaking.* Suitable for a one-semester literature course. Chicago: Scott, Foresman and Co. Illus. 469 pp. $1.60.

Sydney Greenbie. *By Caribbean Shores—Panama, Colombia, Venezuela.* Good Neighbor Series. Evanston. Ill.: Row, Peterson and Co. 84 pp. Paper bound. Illus. 56c.

Sydney Greenbie. *The Central Five—Guatemala, Honduras, El Salvador, Nicaragua, and Costa Rica.* Good Neighbor Series. Evanston, Ill.: Row, Peterson and Co. 84 pp. Paper bound. Illus. 56c.

J. E. Downes, N. H. Singer, and D. Becker. *Latin America and Hemisphere Solidarity.* A unit of study which can be expanded into a basal text. Boston: D. C. Heath and Co. 237 pp. Illus. $1.40.

Bertha M. Parker. *Soil.* Junior high-school biology Unitext in the Basic Science Education Series. Evanston, Ill.: Row, Peterson and Co. 36 pp. Illus. Paper bound. 32c.

General

George D. Stoddard. *The Meaning of Intelligence.* A discussion of the relation of technical issues and research findings to modern life. New York: The Macmillan Co. 504 pp. $4.00.

David E. Bunting. *Liberty and Learning.* The activities of the American Civil Liberties Union in behalf of freedom of education. Washington: American Council on Public Affairs. 147 pp. Paper bound. $2.00.

Schools and Manpower.—Today and Tomorrow. 21st Yearbook of the American Association of School Administrators. Washinton: The Association. 448 pp. Illus. $2.00.

Edward A. Henry, Editor. *Doctoral Dissertations Accepted by American Universities.* No. 9 in a series and covering 1941-42. New York: H. W. Wilson Co. 128 pp. $2.50.

Education Around the World

BRITAIN.—The war has made deep inroads on the number of registrations in British universities, according to the British Information Services, which states that the number of men has declined from 39,000 to about 25,000 since the school term of 1938-39. The number of women students has remained at about 11,000.

The Ministry of Labor is responsible for supplying both men and women to the armed forces and to war industry, and for retaining in their pre-war occupations those who should remain in them. On reaching draft age, which is 17 years and 8 months, youths are required to register at the local office of the Ministry of Labor. Within a few weeks after their eighteenth birthday they are called to the forces.

The drafting of men from British universities is carried out by Joint Recruiting Boards. Each board consists of a representative of the Navy, Army, and Air Forces and a chairman nominated by the University's governing body. The board decides who should be deferred and whether the proper proportion of students is being prepared in each field.

The greatest shortage of trained personnel has shown up in radio, radio-physics, and electrical engineering. To a less extent there are shortages in chemistry, medicine, and statistics. To help meet the shortages, the government has instituted "state bursaries" (scholarships) for selected students at the age of 17 plus, under which the entire maintenance and tuition expenses of both men and women students are paid.

JAPAN.—"Brisk reformation" of the Japanese educational system in the direction of closer governmental control was approved by the Tokyo cabinet of January 21, the Tokyo radio said in an Empire broadcast reported by the Federal Communications Commission. The broadcast said that inspectors with sweeping powers over educational methods and school textbooks would be appointed to supervise "the management and guidance" of pupils and students. Several other bills streamlining education in conformity with the "Greater East Asia War" were approved by the cabinet, the broadcast added.

DENMARK.— Reform schools in occupied Denmark are so overcrowded that youthful offenders are now being sent to Denmark's prisons, according to a Danish press dispatch recently received by the Office of War Information. Devoting a special editorial to the problem of growing juvenile deliquency, the Danish paper told how these boy's fathers worked "abroad" while the mothers spent their time in "disreputable company."